THE JOURNAL OF GEOGRAPHY

VOLUME XII *JUNE,* 1914 NUMBER 10

THE PROBLEM OF PLACE GEOGRAPHY*

By Douglas C. Ridgley

State Normal University, Normal, Ill.

THE brief but helpful definition of geography which has found wide use in recent years is this: Geography is the study of the earth in its relation to life. The relationships existing between the physical features of the earth and living forms, especially man, must be a guiding principle to every teacher of geography.

No geographic topic can be studied intelligently and comprehensively without dealing with places, hence the necessity of teaching the definite location of places with every topic in geography. Place geography is not a separate and distinct division of the subject, but a phase of the study which is as thoroughly interwoven into every geographic topic, as are the addition and multiplication tables into all arithmetical calculations.

We make neither plea nor apology for insisting on a correct development of the facts of addition and multiplication, and on vigorous and frequent drills—drills both timely and untimely—with one supreme aim in mind, namely, to give to each child an indispensable tool, keen and ready for instant use at all times and under all circumstances throughout life.

There need be no more apology for definite, thorough study and effective drills on those places in geography which should be known to every intelligent person, than for the study of multiplication and addition tables. The same supreme aim holds good, namely, to give to each child an indispensable tool, keen and ready for instant use at all times and under all circumstances.

The problem of addition and multiplication is simplified by universal agreement with reference to the necessity of individual mastery. It is further simplified by the field of work being limited and definite—45 facts of addition and 64 facts of multiplication—a total of only 109 number combinations forms the basis of all arithmetical calculations.

The problem of place geography is somewhat more difficult to solve than that of addition and multiplication because there is not universal agreement concerning the necessity of absolute mastery of knowledge of places. It is rendered still more difficult because the field of work has no exact and definite limits acceptable to all concerned. However, if all teachers agree

*Read before the Earth Science section of The Twenty-sixth Educational Conference of the Academies and High Schools in Relations with the University of Chicago, April 17, 1914.

that there is a problem of place geography as real, as vital, and as important to the education of the child as that of addition and multiplication in arithmetic, all difficulties will be met and overcome not only in one schoolroom here and there, but in every classroom throughout the land where geography is taught, whether in elementary school, high school, normal school, college, or university.

Let us as teachers of geography seek to discover the problem, not in a hazy, indefinite, uncertain way, only to relegate the whole matter to the pedagogical scrap heap by throwing the responsibility on the elementary teacher, but in a specific, hopeful, helpful, vigorous fashion with the intent, not only to find the problem, but to solve it definitely and certainly, not at some indefinite future time, but now, for the classes under our instruction only for a few more weeks.

The fact that a real problem of place geography exists is shown clearly by many experiences of many teachers. A university teacher placed in the hands of each member of a large class an outline map of the United States on which the names of the states were to be written. One of the maps, when handed in, contained the name of but one state and that was at the wrong place.

A wall map of the world was placed before a first-year high school class, and they were unable to find on the map the Mediterranean Sea, Red Sea, and other places of equal note. They had not had geography after the sixth year. Teachers of an elementary school agreed that their geography work should be so presented that pupils having completed the study of the United States should be able thereafter to name readily all the states with an outline map before them. A test showed averages by classes from 49 per cent to 79 per cent.

The experience of any teacher of geography from the elementary school through the university brings to light the desirability of improvement in the permanent knowledge of places. What may we reasonably expect of our geography teaching in this field? What places should be so taught that pupils shall have, not only a vivid map image of the place, but a true and accurate world image of the place relationships? How can we, without using more time and effort than this phase of geography deserves, make sure that certain minimum requirements are met by all pupils? Can we agree to select and teach thoroughly and well a certain list of places that every intelligent person should know with reference to location, direction, and distance from home on the surface of the earth? These are some of the questions which seem appropriate to bring up in this discussion.

The work outlined in a course of study for geography in any elementary school shows that numerous places of all classes come to the attention of pupils. The subject matter of place geography is fully covered in any attempt to teach geography. Why, then, do we not find pupils equipped with a com-

plete knowledge of place geography? Simply because no provision is made for permanent mastery of a relatively small body of knowledge by frequent, rapid, interesting, effective drills. This small body of knowledge should be carefully selected so as to form a nucleus of a larger knowledge of geography just as the ever necessary addition and multiplication tables form the nucleus for a larger and larger knowledge of arithmetical operations.

Parents and pupils have a right to expect that the geography teaching shall give permanent knowledge of the names and location of the continents and oceans, of the chief political divisions of the earth, a few of its great plains, plateaus, and mountains, its great cities, its large rivers, its most important lakes, a few of the great gulfs, bays, and straits. They have a right to expect the study of geography to enable a clear, accurate idea of the place relationships of the important geographic units under discussion from day to day in the public press. The study should be so conducted that pupils shall have developed the atlas habit sufficiently to have the desire and the ability to learn and fix in mind the less important geographic places which find special mention in the discussion of current events, thus enlarging permanently the place geography taught in the schools.

If we as teachers meet such reasonable expectations of those whom we serve, it is necessary that we have as definite, concerted action in the study of place geography as we have in the study of the addition and multiplication tables.

The first step in such action is the selection of a limited number of places which may be used as the minimum requirement for drill work on places. This point may be illustrated by reference to a recommendation recently made by the teachers of geography in the elementary grades for the schools of Springfield, Ill. Individual teachers made out lists of places that should be considered as a minimum of place geography to be taught in the fourth and fifth grades, and thoroughly mastered by the close of fifth grade with the completion of the study of the elementary textbook. These lists were summarized by a committee and their results accepted by the geography teachers as a basis of definite work.

The following summary indicates the number of places associated with various maps. No duplicates are included in this summary:

World	30 places
North America	27 places
United States	143 places
South America	35 places
Europe	67 places
Asia	39 places
Africa	19 places
Australia	11 places
Total	371 places

We may agree that a clear, accurate, permanent knowledge of the place relationships of these 371 places forms a solid basis of place geography not only for the sixth grade, but for the high school or even for college geography.

A further analysis of this list shows that the 30 places of the world map include 6 continents, 5 oceans, 9 highlands, 4 islands, 3 straits and isthmuses, 3 mathematical places. The places of the United States include 48 states, 48 capitals, 1 federal district, 1 national capital, 12 surface features, 17 rivers, 7 lakes, 14 coastal features, 19 cities, not capitals; 24 of these places are duplicates from the maps of the World and North America. The places of Asia include 6 political divisions, 6 surface features, 8 rivers, 6 islands, 4 lakes, 7 coastal features, 7 cities, 5 of these are duplicates from previous maps.

A careful analysis of the entire list does not reveal any places which are not of value in the general knowledge of every progressive citizen. If this list is mastered as early as recommended, by the end of fifth grade, and due emphasis given to location of places in later years, the problem of place geography will be solved for the pupils of the Springfield schools.

Place geography is only a phase of the larger field of geography, *and must not be set up as an end in itself*. Places will come up in the usual topics of the course of study. Frequent, brief and rapid drills on a selected list of places simply serve to strengthen, and not to supplant, the vital topics of the course of study.

Members of this high school conference may feel that this discussion is for primary, not for high school teachers, but the high school problem of place geography has been constantly in mind. The problem is the same, whether we find it in primary or grammar grade, high school or university. The problem is simply this,—How shall we teach our pupils the place geography they ought to know if they have not yet learned it? The method of solving the problem may differ in different situations, but the answer should be the same for all classes,—The pupil has learned through our teaching the place geography he ought to know.

The elementary school teacher will solve the problem by frequent, well-planned, carefully prepared class exercises involving in the aggregate considerable time along with other phases of geography work.

The high school teacher may solve the same problem by using the same list of places prepared for the elementary school and requiring sufficient map study and rapid drill early in the course to give mastery of the selected places, and to develop the atlas habit so that the work of the course will add naturally and easily an ever increasing knowledge of place geography.

The university teacher may furnish his class with a selected list of place names, with the request that each student master the list forthwith if he finds anything in it that he does not already know. He may apply any test

he may devise, oral or written, to bring sharply to the consciousness of the student the necessity of being well-informed and alert on matters of ordinary place geography.

In all this work let us accept cheerfully, as our responsibility, the necessity of giving those under our charge the minimum of place geography if they do not now have it. Let us not throw the blame for a bad situation on the teacher of earlier years and then shirk our own plain duty. Let us co-operate with the teacher of the elementary school and learn each from the other how to do this work better.

If a carefully selected list of places were prepared, a knowledge of which should form a part of the mental equipment of every well-informed person, and made available to the teachers of the schools with suggestions for the use of the list, the problem of place geography would be clearly stated, and its solution would come naturally and rapidly all along the line in elementary school, high school, normal school, college, and university.

The following articles dealing with phases of place geography have appeared in the Journal of Geography in recent years:

A Present Weakness in Teaching Geography, W. S. Tower, Vol. 6, p. 262, Mar. 1908.

The Fundamental and the Incidental in Geography, R. H. Whitbeck, Vol. 5, p. 66, Feb. 1906.

The Multiplication Tables of Geography, W. A. Owens, Vol. 12, p. 13, Sept. 1913.

The Teaching of Place Geography, D. C. Ridgley, Vol. 11, p. 13, Sept. 1912.

The Teaching of Geography—A Criticism and a Suggestion, Rollin D. Salisbury, Vol. 8, p. 49, Nov., 1909.

Note. During the general discussion of the program, a motion was made and carried that a committee be appointed to prepare a list of place names suitable for definite study by high school classes in physiography. This list, when prepared, is to be furnished to the members of the conference. The Springfield list follows.

LIST OF PLACES RECOMMENDED AS SUITABLE FOR THOROUGH MASTERY BY PUPILS IN THE SCHOOLS OF SPRINGFIELD DURING THEIR GEOGRAPHY WORK OF FOURTH AND FIFTH GRADES.

These places will come up naturally again and again in the development of the course of study as outlined for these grades. The list is desirable in order that some special drill on place geography may be done occasionally to assure definite results. The places named in the list should be known to every pupil in geography and to every intelligent citizen who is reading the current news of our own and other lands.

The following summary indicates the number of places which may be associated with various maps. Many places will occur on two or more maps,

and should be studied on all maps on which they are found. No duplicates, however, are included in this summary.

World	30	places
North America	27	"
United States	143	"
South America	35	"
Europe	67	"
Asia	39	"
Africa	19	"
Australia	11	"
Total	371	places

The following analysis of each of the above units indicates definitely by general or specific reference the places recommended.

The World

Six Continents—Antarctica may be named as a seventh continent.

Five Oceans.

Nine Highlands—Western Highlands of North America, Appalachian Mountains, Andes Mountains, Alps Mountains, Himalaya Mountains, Plateau of Tibet, Atlas Mountains, Abyssinian Highland, Great Dividing Range of Australia.

Four Islands—Greenland, Iceland, West Indies, East Indies.

Three Straits and Isthmuses—Bering Strait, Isthmus of Panama, Isthmus of Suez.

Three Mathematical Places—North Pole, South Pole, Equator.

North America

Six Political Divisions—Alaska, as a possession of the United States, Canada, United States, Mexico, Central America, as a group of seven small states, Panama as one of the Central American states.

Nine Surface Features—Western Highlands, Rocky Mountains, Sierra Nevada Mountains, Cascade Mountains, Coast Range, Great Basin, Appalachian Mountains, Central Plain extending from Arctic Ocean to Gulf of Mexico, Atlantic Coastal Plain, Mexican Plateau.

Six Rivers—Mackenzie, Nelson, Mississippi, Missouri, Ohio, St. Lawrence and Great Lakes.

Eleven Coastal Features—Three oceans, Hudson Bay, Gulf of St. Lawrence, Gulf of Mexico, Gulf of California, Bering Sea, Peninsula of Alaska, Peninsula of Lower California, Peninsula of Florida.

United States

Ninety-eight Political Units—48 states, 48 state capitals, one federal district, one national capital.

Fourteen Surface Features—Western Highlands, Rocky Mountain Range, Sierra Nevada Mountains, Cascade Mountains, Coast Range, Great Basin, Appalachian Mountains, Atlantic Coastal Plain, Mississippi Valley, Valley of California, Central Plain, Gulf Coastal Plain, as a part of the Central Plain, Great Plains, west of the 2000 ft. contour to the Rocky Mountains.

Seventeen Rivers—Mississippi, Ohio, Missouri, Arkansas, Colorado, Green, Grand, Columbia, Snake, Connecticut, Hudson, Delaware, Potomac, Rio Grande, Red River of the North, Red River of the South, St. Lawrence.

Seven Lakes—Lake Champlain, the five Great Lakes, Great Salt Lake.

Fourteen Coastal Features—Two oceans, Long Island, Long Island Sound, Delaware Bay, Chesapeake Bay, Peninsula of Florida, Delta of the Mississippi, San Francisco Bay, West Indies, Cuba, Haiti, Jamaica, Porto Rico.

Eighteen Important Cities not Capitals—(Always require name of state after name of city) New York, Chicago, Pittsburg, Cleveland, Detroit, San Francisco, New Orleans, St. Louis, Minneapolis, Kansas City, Mo., Kansas City, Kans., Galveston, Savannah, Louisville, Baltimore, Fall River, Lowell, Milwaukee.

South America

Sixteen Political Units—Thirteen countries, the capitals of Brazil, Argentina, Chile.

Twelve Surface Features—Andes Mountains, Brazilian Highlands, Guiana Highlands, Llanos, Selvas, Pampas, Orinoco, Amazon, LaPlata, Paraguay, Uruguay, Lake Titicaca.

Seven Coastal Features—Two oceans, Caribbean Sea, Strait of Magellan, Tierra del Fuego, Cape Horn, Cape St. Roque.

Cities not Capitals—Para, Valparaiso, Callao.

Europe

Twenty-eight Political Units—These thirteen countries and their capitals: British Isles, Germany, France, Holland, Belgium, Denmark, Norway, Sweden, Austria-Hungary and its two capitals, Switzerland, Russia Italy, Greece; also England as a part of the British Isles.

Eight Surface Features—The Alps Mountains, Apennine Mountains, Pyrenees Mountains, Caucasus Mountains, Ural Mountains, Scandinavian Highlands, Mt. Vesuvius, Plains of Europe.

Seven Rivers—Thames, Rhine, Rhone, Seine, Po, Danube, Volga.

Thirteen Coastal Features—Two oceans, Mediterranean Sea, Black Sea, Caspian Sea, North Sea, Baltic Sea, English Channel, Strait of Dover, Strait of Gibraltar, Scandinavian Peninsula, Iberian Peninsula, consisting of Spain and Portugal, Peninsula of Italy, Balkan Peninsula, Island of Sicily, Iceland.

Twelve Cities not Capitals—Liverpool, Birmingham, Manchester, Belfast, Hamburg, Amsterdam, Havre, Marseilles, Odessa, Venice, Naples, Moscow.

Asia

Six Political Divisions—Siberia, China, India, Japan, Persia, Turkey in Asia. Locate Palestine.

Six Surface Features—Himalaya Mountains, Plateau of Tibet, Siberian Plain, Plains of China, Plains of India, Dekkan Plateau, Desert of Gobi.

Eight Rivers—Lena, Hoang-ho or Yellow, Yangtze, Ganges, Indus, Euphrates, Tigris, Jordan.

Six Islands—Islands of Japan, Philippines, Sumatra, Java, Borneo, Ceylon.

Four Lakes—Dead Sea, Sea of Galilee, Aral Sea, Lake Baikal.

Seven Coastal Features—Three oceans, Bering Sea, Bering Strait, Japan Sea, Red Sea.

Seven Cities—Always give name of country after name of city: Peking, Hongkong, Tokyo, Yokohama, Calcutta, Bombay, Jerusalem.

Africa

Four Political Divisions—Egypt, British East Africa, Belgian Kongo; Union of South Africa, recently formed, includes Cape Colony, Orange River Colony, Transvaal, Natal.

Three Surface Features—Atlas Mountains, The Sahara, Highlands of Abyssinia.

Four Rivers—Nile, Niger, Kongo, Zambezi.

Three Lakes—Victoria, Tanganyika, Chad.

Six Coastal Features—Two oceans, Mediterranean Sea, Red Sea, Isthmus of Suez, and Suez Canal, Madagascar.

Five Cities—Give name of country after name of city: Cairo, Alexandria, Cape Town, Kimberley, Johannesburg.

Australia

Three Political Divisions—Queensland, New South Wales, Victoria.

Two Surface Features—Great Dividing Range, Australian Desert.

Two Rivers—Murray, Darling.

Two Coastal Features—Two oceans.

Three Islands—Tasmania, New Zealand, New Guinea.

Two Cities—Sidney, Melbourne.

Note: This list of place names was prepared by a committee of the Normal Extension Class in Geography, and unanimously recommended by the class for use in the city schools of Springfield, Illinois.

VIENNA

By Charles McMurry
DeKalb, Ill.

THE reconstruction and elaborate improvement of Vienna during the last half of the nineteenth century is a marked illustration of the scientific and artistic regeneration of city life in modern times.

When Francis Joseph came to the throne of Austria in 1848 Vienna was one of the worst conditioned capitals in Europe. Its sanitary condition was completely bad and almost medieval. Cholera and other recurrent diseases were prevalent and had been for many years, and the death rate was very high. There was no satisfactory water supply nor adequate sewage system. The city was growing rapidly in population and the spirit of modern progress was strong, but it was handicapped by cramping medieval conditions. It had about 600,000 people.

Vienna consisted of a square mile of crowded city, surrounded by a heavy fortification, crowded almost to suffocation into the narrow streets of the ancient city. The villages that had begun to spring up outside the city wall were wretched suburbs without proper plan or connection with the city. The wall and ditch and a considerable territory outside of them belonged to the city as public property, and now, after much discussion, it was decided to level the walls, fill up the ditch and, taking advantage of this broad circle of free territory, to work out a magnificent scheme of public improvement. The Emperor, Francis Joseph, took the lead in this great enterprise, and the whole city followed enthusiastically in his steps. Several years were first spent in deliberately working out a complete plan. It then took some three years to demolish the walls and clear the space. A complete scheme for re-building and beautifying the city had been worked out with the idea of converting this cleared zone into a succession of boulevards and parks with broad and commanding spaces for great national buildings. The splendid Ringstrasse, nearly 200 feet wide, with its adjacent pleasure grounds, parks, and unequalled series of magnificent public buildings has been the result. Four-fifths of the spacious girdle around the old city was preserved for public uses, while a fifth part was laid out into spacious streets and sold for private uses. These sales put into the hands of the government about $80,000,000 and this, in addition to large sums furnished by the national government, by the city, and by private companies gave the means for constructing upon the circuit of the Ringstrasse the most elaborate and imposing series of public buildings upon any single street in the world. The highest architectural and artistic skill was employed both upon the buildings and adjacent parks and gardens. The private and business structures were required to satisfy the same standards of good taste.

"The new monumental structures facing upon the Ringstrasse include the Rathhaus (city hall), a surpassingly beautiful specimen of the modern Gothic, opened in 1885; the Austrian parliament buildings, in pure Grecian style, opened in 1883; the main building of the University of Vienna, a magnificent Renaissance structure, completed in 1884; the royal theatre, unequaled in Europe, and opened in 1888; the Votive church, finished about 1870; the Palace of Justice, opened in 1882; the imperial museums of art and science, two magnificent Renaissance buildings, opened since 1890, between which, with ample space for effect, is the colossal monument of Maria Theresa; the new imperial palace, not yet finished; the imperial opera house, finished before 1870; various palaces, museums, art schools, garrison and arsenal buildings, and showy structures for commercial exchange or other business purposes. The Ringstrasse has been criticised as grouping together too many magnificent structures in different styles of architecture, the individual buildings thus failing to produce the full impression they might convey if more entirely isolated. I am not disposed to think that the facts justify the criticism, in view of the generous garden spaces which give each great structure an ample approach."

The Ringstrasse was made not only a beautiful street but also the center from which all the traffic and street car lines of the city radiate. From the Ringstrasse in all directions were laid out the broad, paved highways leading through the outer city to the suburbs. The rapid growth of population and the march of improvement extended to these modern portions of the city and they rapidly developed into grand residence and business districts.

At the same time the old inner city was remodeled, its narrow streets straightened and widened, and this involved a large amount of destruction of old buildings and reconstructions on a superior plan. These vast improvements in the general street plan of the city were attended with wholesale and costly betterments in other directions. A greatly improved water system brought spring water from the Alps, 80 miles distant, and a reorganization and extension of the sewer system carried the waste of the city into the Danube, several miles below. One of the most expensive works was a shifting and regulation of the course of the Danube, and the building of great piers and wharves for the accommodation of the extensive steamboat and barge shipping which centers here. The construction of large markets and slaughter houses under public supervision, the development on a grand scale of the public school system with ample buildings, were other enterprises demanding liberal municipal expenditure, and were carried out at the same time.

An extensive park system was laid out and developed. The Pratu on an island in the river, and another large park on the south side of the city, besides numerous smaller parks distributed in various suburbs, constitute a complete means of out-door recreation, and fresh air enjoyment.

The modern city, which was developed along broad avenues, radiating from the Ringstrasse, now constitutes the much larger portion of Vienna. With a population of more than two millions, it has become one of the beautiful and healthy cities of the world.

The sanitary improvements, including water and sewer systems, street cleaning, public markets, hospitals, parks and good house accommodations, have gradually advanced from year to year till the death rate was less than half what it had been up to 1848. Thousands of lives are saved every year, and Vienna has become a healthy and happy place in which to live.

It required about fifty years to work out step by step this expensive series of city improvements. The rebuilding of a great city, the remodeling of its street system and the embellishment with vast public buildings and other even more costly improvements was a gigantic undertaking, but it has all been accomplished in the life time of one ruler, Francis Joseph, and he still lives to enjoy the fruits of his labor.

During nearly the same period the city of Buda-pest, the other capital of Austria-Hungary, has undergone a similar transformation, and has grown into a great modern city, with all the municipal improvements of modern scientific progress.

The city of Berlin, the capital of Germany, has even surpassed Vienna in its growth and municipal enterprise. Especially since the Franco-Prussian war, which made Berlin the capital of an empire, it has made surprising progress in streets and public buildings, in parks and monuments, in the perfection of its municipal arrangements. Berlin today is a remarkably attractive and artistic city.

And what has happened in these capital cities has likewise taken place in all the smaller cities of Austria and Germany. The last sixty years has been a period of city building and rebuilding. The populations have been concentrating more and more in the cities. Nearly all the larger cities have doubled their population in the last twenty-five or thirty years. The improvement in sanitary conditions, in street and house construction, in parks, public markets, water supply, and in all means of education, culture, and amusement has kept pace with the rapid growth of cities.

In France the same thing has happened. Paris was the first large city to clean up and remodel its streets, and even today Paris is regarded as the most completely developed city. In point of streets, public buildings, museums and genuine municipal equipment, Paris seems to have led the modern world.

WHAT SHALL SCHOOL GEOGRAPHY INCLUDE?

WE are publishing this month an article by Professor Tower of the University of Chicago in which he urges a more rigid exclusion of non-geographical topics from field-studies in commercial geography. He believes that on a factory excursion in commercial geography students ought not to make a study of industrial processes within the factory itself, at least not under the guise of geography. He takes the ground that, while such a study may be interesting and profitable, it is not geography, and he regrets that the Journal seems to give its endorsement to the type of geographical excursion which does lay emphasis upon non-geographic processes in industry.

Professor Tower is certainly right in his contention from a strict point of view. Some of the topics taken up for study in the excursions to which he refers were not geographical topics and doubtless the teachers who conducted these excursions would not defend them as such. If we believed that excursions such as those described by Mr. Cushing and Miss Mears in the December, 1913, issue of the Journal did not in their final influence advance the geographical interests and knowledge of the students who took the excursions, we should not endorse them even by implication. It is our belief, based upon a considerable number of years of experience and observation, that those teachers who have the enthusiasm to take their students on factory excursions will teach much more real geography than other teachers, even though they may also teach under the name of geography some things which should not be so labeled. There really can be no harm in discussing points which naturally arise in one of these excursions in geography, even though those points are not, strictly speaking, geographical, providing of course that *they are closely related to the geographical topics which are being studied*. It would be a misfortune to take a class on a factory excursion and not let them see and ask questions about a number of things which they saw and which naturally grew out of their visit, even though some of the points belong more logically to industrial studies than to geography. It is our observation that the teachers who conduct these excursions teach more *real geography*, not less, than the stay-at-homes.

The point of view taken by Professor Tower is a natural one for a college teacher to take, and so also is the point of view taken by the two normal school teachers before referred to. The college teacher is naturally and properly concerned with a close definition of his subject. This is not so below the college. Most geography teachers teach other subjects also. They are interested, and properly interested, in a variety of things; so are their pupils. Geography is only one of these things, not more important and not less important than several others. These teachers believe that industrial processes and certain other non-geographical ideas connected with manufacturing, for instance, appeal to the native interests of their pupils. They believe that one of the best ways to develop and maintain a permanent interest

in real geography is not by viewing the subject technically, but by introducing into the geography work interesting points and discussions *closely related to the geography excursion.* We believe that if the university professor and the normal school teacher were to exchange places, each would gradually change his point of view because each would see the matter under new conditions and would govern his thinking and his practice by the conditions under which he was working.

It may be well, however, to throw out a caution to enthusiastic teachers who take their pupils on factory trips, namely, that they need to watch the drift of their studies lest they be led too far from the central purpose of the excursion.

Superintendent Lloyd E. Wolfe of San Antonio, Texas, published in the *Atlantic Educational Journal,* April, 1903, one of the best discussions of the study of industrial processes in geography that we have ever seen. Since this presents the point of view held quite generally by school superintendents and principals, we publish extracts from it following Professor Tower's article. Persons interested in the two points of view may thus compare what may be termed, the college man's position and the school superintendent's position, for we think the two articles fairly represent the two positions. It is, of course, to be recognized that Supt. Wolfe is speaking of geography in grades and not of excursions in commercial geography.

—R. H. W.

THE QUESTION OF FIELD WORK IN GEOGRAPHY

By Walter S. Tower
Department of Geography, University of Chicago

IN most of the sciences it has been found that work in a laboratory is necessary, or highly desirable, for the student, in order to secure the most effective grasp of the subject. For the earth sciences, geography and geology, the most useful laboratory lies beyond the limits of the classroom—in the world of out-of-doors. Their phenomena cannot be brought in; if they are to be seen, they must be sought out and observed where they occur. In geology, the advantages of such observation clearly have been recognized for a long time, and, as a result, the subject generally has been taught in connection with field work that brings before the student examples of various structures and other geologic phenomena, many of which the student must interpret for himself.

Geography, on the contrary, with the possible exception of some courses in physical geography, still is largely a classroom study, which means being handled in such a way that there is little, if any, actual contact with geo-

graphic phenomena. Many things are talked about, but nothing is made vitally real by personal observation.

Most people doubtless will agree with the general proposition that the value and attractiveness of any science are enhanced for the student by personal observation of its phenomena. This element of contact with the things studied is an important reason for the fact that most students show greater interest in phenomena of land forms than in phenomena of the oceans. Most people doubtless will agree also that the condition in geography should be remedied, and that if practicable, through field work in geography, there should be offered an opportunity for the student to benefit by a first hand study of his subject—that is, by the observation and explanation of earth features in their relations to life. No one now seems to have any doubt that the corresponding practice in geology is of very great value to the students, irrespective of their degree of advancement in that subject.

Not infrequently it is said that developing field work in geography, on a small scale, is impracticable, because the subject deals with all parts of the world and with a multitude of conditions, and thus it becomes impossible personally to observe most of its phenomena, except through the expenditure of much time and money. It is true that the phenomena of geography are infinite in number and world-wide in their distribution, and that here the concern is only with such a scale of field work as is possible for the ordinary class of students, beginning, or not far advanced, in the subject. It is true that only a relatively small number of geographic phenomena are illustrated by the conditions existing within the radius covered by the average field trips, but it probably also is true that every locality affords, within easy access, more examples of geographic than of geologic phenomena. For geology it generally has been felt that taking advantage of the opportunities for field work in the home locality, limited as they might be, is preferable to leaving the student without field work of any sort. On similar grounds, the arguments for field work in geography should be equally strong, if not stronger, because of the greater opportunities offered in the average locality for such first hand contact with examples of the things discussed in the classroom.

It commonly is assumed that the chief, if not the sole, value of field work in geography is its service in supplementing and vitalizing classroom discussions. The importance of field work in those respects may be granted, but there is equal, if not greater, value to be derived from it in other ways. Field work gives the student a chance to discover for himself geographic relationships, in addition to those dealt with in the classroom. In this way there may be developed a degree of interest which could be awakened in no other manner. Field work helps greatly to develop and train the powers of close and accurate observation and to encourage the habit of reasoning logically. Such qualities are invaluable assets for the student in every phase of later life. Field work gives the individual a clearer understanding, and a keener

appreciation, of the conditions in the world about him, thus helping to make his life more interesting to himself and more useful to his community.

Up to the present time attempts at field work in geography largely have been of two sorts: (1) field trips with classes in physiography; and (2) trips in connection with courses in economic and commercial geography.

The field trips with classes in physiography have had as their main object the interpretation of land forms, the central idea being the correlation of observed forms with the processes which produced those forms. This sort of field work has real value as far as it goes, but from the geographic standpoint it is too narrow, since it stops short of the chief object of the science, the correlation of earth features and life responses to those features. This difference may be illustrated readily by taking a typical case.

In a hilly region of moderate relief, where most slopes are well matured and many streams have built well defined flood plains, a single stream and its valley might be the area chosen for a field trip. If the field work were physiographic, some of the things studied would be: (1) possible influences of bed rock on the location, trend or general development of the valley; (2) the angles of slope of the valley sides and reasons for variations in these slopes; (3) causes for variations in the width of the valley; (4) relations of tributary valleys and streams to the main valley and its stream; and (5) evidences of the kinds of work then being done by the stream, with reasons for that work and the results of that work.

If the same region were visited for the purpose of well-rounded geographic study, many of these same things might be noted. The real object however, would be to carry the observations and explanations much farther, including for example: (1) reasons for contrasts of natural vegetation between the hill slopes and the flood plain; (2) the effects of topography and soil on man's use of the land; (3) the relations of the valley to the locations of dwellings and routes of travel; (4) effects of the character of the stream on its uses; (5) influences of the valley or stream on local activities other than the use of the land and the stream itself; and (6) evidences of climatic influences affecting the life of the region.

As a rule, wherever a limited area is worth visiting for purely physiographic study, it is worth fully as much, if not more, for geographic study. Furthermore, many areas, offering little in physiographic features, offer much for geographic analysis. In either event the geographic study results in a broader appreciation of the locality, and a wider outlook, because *all* the associated things are linked, as far as possible, in the relationship of cause and effect.

A field trip such as the one outlined might readily illustrate many phases of general geography, while its disciplinary value would be unquestioned. This sort of field work is perhaps the most profitable for students, if shaped with reference to their degree of advancement in the subject, and it can be done on some scale almost universally.

The other type of thing which has been developed under the head of field work in geography is the excursion made in connection with courses in economic and commercial geography. For the most part such excursions have been visits to manufacturing establishments, with the observation of manufacturing processes as the chief object. In a recent number of the Journal of Geography, for example, there were two articles dealing with this aspect of the question. One article advanced the idea that the course in commercial geography should center around the study of the local manufacturing industries. In elaborating on this idea, the author implied that the study should deal largely, if not mainly, with the conditions within the factories. Frequent visits to the factories to observe processes and products were recommended. The second article presented an outline of the things studied by a class in geography, while making an excursion through the local steel mills. Among the things studied, mention was made of cost of manufacture, degrees of skill among laborers and foremen, and safety appliances.

It is unfortunate that such articles should appear in the only journal devoted primarily to the interests of teachers of geography, because both articles carry an entirely wrong notion of what geography is and what field work in the subject should be.

In general, geography has nothing whatever to do with the observation or explanation of manufacturing processes, and, therefore, the conditions and events inside a factory largely are beyond the limits of the subject. I make no claim that a teacher of geography may not venture into a factory on penalty of loss of reputation. Nor do I advance any argument that it may not be useful for anyone to know about what is done in various factories. I do maintain, however, that the study of factory processes is not geography, that the facts of manufacturing operations are not geographic facts, and that trips through industrial establishments are not geographic field work. However desirable it may be for students to know about the operations involved in the important industries of their home town, it is equally desirable perhaps for them to know how to swim, speak French, or sew on buttons, but it is no more the province of geography to teach the one thing than it is to teach the others. If students are to be taught *how* things are made, it must be done under some other label than that of geography.

It does not follow, however, that there may not be any geographic field work focused on manufacturing industries. As a matter of fact, some of the most effective supplementary study, especially for the city school, may be found in the explanations of local industries from the geographic standpoint. These studies should include such things as: (1) the reasons for the kinds of industries carried on, in which connection such influences as sources of raw materials and power, distribution of labor supplies, facilities for transportation, and location of markets will be noted; (2) the causes for the general distribution of factories and for special groupings of factories devoted to the different classes of industries; (3) the effects of the development of

manufacturing on the growth of the city; (4) the natural advantages of the city as a manufacturing center, first, as compared with other places having the same sorts of industries, and second, as a place to start other kinds of industries; and (5) the influences of the city and its industries on the activities of the nearby rural districts. This type of field work certainly is just as useful as the type which has been condemned and it has the added advantage of lying well within the limits of geography, so that the things observed may be referred directly to other related parts of the subject, in groups of causes and effects.

Here then is the test to apply in determining on field work: the observations and explanations must fall harmoniously into groups of causes and effects. Thus the explanations of the location of flour mills and of plants for manufacturing agricultural implements in a given city readily would meet this test, but no method of treatment can correlate the process of bolting flour and the making of a twenty disc gang plow.

Geography needs field work, but field work which is truly geographic.

EXTRACTS FROM "THE HUMAN SIDE OF GEOGRAPHY" BY SUPT. LLOYD E. WOLFE. (*Atlantic Educational Journal,* Vol. 6, No. 4.)

"In this paper an attempt will be made to maintain the thesis that geography in the grades should include those industrial steps, or processes, in manufacture and transportation in which capital and labor are applied to commodities for the purpose of adding utility. The term 'commodity' is used in order to exclude those industrial steps in manufacture, transportation, mining, and agriculture in which capital and labor are applied, not to commodities, but to natural resources. The best authorities on geography already recognize that geography includes those initial steps which deal with natural resources—with what the political economists call 'natural agents.' * * * Many of the recent text-books on geography give more space to the naming and locating of industries than was formerly given; but no adequate emphasis is given to the great motive for these industrial steps; namely, the adding of utility to a commodity that it may more perfectly minister to human well-being in the form of a finished product. It is this motive that gives life and interest to industrial and commercial processes. Under the inspiration of this motive, the race has conquered its physical environment to its well-being. * * * By general consent, geography is the science which deals with the earth as the home of man. Finished products that minister to human well-being in the form of food, clothing, shelter, and fuel, are the things that make a home for man. But we have found that these finished products are a result of the application of labor and capital to commodities. To define geography as the science which deals with the earth as the home of man, and then to exclude from its subject-matter all those industrial processes that deal with commodities, is but little less than a travesty upon the expression 'as the home of man.' * * * Again, these secondary industrial pro-

cesses appeal strongly to the self-activity of the child, because they concern so vitally his well-being. The fact that human well-being has been the master-motive of the race in inventing these industrial processes is a guarantee that the same motive and processes would appeal strongly to the interest and self-activity of the child. * * *

"The self-activity of the pupil asserts itself, not only in tracing the forms that minister to human well-being—food, clothing, shelter, fuel—back to their origins in the raw material and the physical resources, but in hunting them back to the places from which they come—first to the store; then back of the store, to the factory, the farm, and the mine. With interest in the *whence* of the products that minister to human well-being comes an interest in the agencies that carry away the surpluses of one community and bring in those of another; namely, transportation. * * *

"As the pupil advances in maturity his circle of the *whence,* with its corresponding circle of transportation, enlarges till it covers the earth, thus introducing him to every kind of transportation by land and water. * * *

"With ideas of the *whence* and its accompanying idea of transportation come ideas of exchange, through which man commands the commodities of the globe. With ideas of the *whence* necessarily go ideas of the *whither.* Man naturally desires to know whence come the articles that contribute to his physical well-being, and whither those go that he gives in exchange. * * *

"The above discussion has been one of interpretation, from the finished product which ministers to the child's well-being, back, through the essential industrial steps, to the raw material and the natural resource in soil, ore, and climate. More logical, and perhaps but little less pedagogic, is the method that passes from the natural resource and raw material to the finished product. Here we notice that each industrial step adds utility to the preceding raw material, makes this material answer man's needs more and more perfectly. * * * This rising of raw material of low utility, step by step, to the finished product of high utility appeals strongly to the pupil's self-activity, because it vitally concerns his means of subsistence—his very existence. * * *

"We have seen that each series of industrial steps takes its rise in natural forces and resources—in inorganic environment; in the soil, the ore, the clay, the stream, the wind, the stone in the quarry. How, then, shall these inorganic facts be taught so as to appeal most strongly to the self-activity of the pupil? Evidently from the economic, industrial, and commercial standpoint—from the human centre. The order of interest is as follows: (1) in the finished products that minister to human well-being; (2) in the industrial steps that have created these finished products out of raw material; (3) in the initial industrial steps in mining, agriculture, and lumbering that have transformed natural resources into raw material; (4) and, lastly, in the origin of the natural resources."

THE SUBJECT MATTER FOR AN ELEMENTARY COURSE IN ECONOMIC AND COMMERCIAL GEOGRAPHY*

By Mary J. Lanier
Department of Geography, The University of Chicago.

THE criticism has been made that "geography as it is taught and written is not developed about any definite central theory," that it is made up of "scraps of information which are dealt with more elaborately and in a truly scientific manner" by the astronomer, geologist, botanist, and the like.

Perhaps this criticism is not entirely without justification when applied to the subject-matter of some texts and courses in what is commonly called "commercial geography." Hence, it is necessary that the terms, economic and commercial geography, be defined clearly. Accepting as the definition of geography "a study of the earth in its relations to life," economic geography is concerned with tracing the influence of natural factors in the *production* of things useful to man, while commercial geography considers the influence of these factors in the *transportation* and *exchange* of commodities.

The object of an elementary course in economic and commercial geography should be to give the student a grasp of some of the big general principles of production and exchange as influenced by geographic factors, *not* to load him down with a mass of facts and figures in regard to the leading producing countries and their trade.

This object can be attained more satisfactorily by a study of the leading *commodities* of commerce than by a study of *countries,* such as is made in various texts. The former treatment necessitates a grouping of commodities and for detailed study, the careful selection of the more important ones from each group. In the time ordinarily available, it is undesirable and impossible adequately to discuss all commodities, and, were it possible, little of value would be gained by the student.

The plan of study by commodities has several advantages:

1. It avoids the repetition which is inevitable when the study is made by countries.

2. Type studies of leading commodities illustrate more readily and more effectively the important principles involved in production and exchange.

3. The student receives the maximum amount of training without considering such a number of details as shall obscure the important underlying relations.

4. A better foundation is laid for regional studies.

(*Read at the Twenty-sixth Educational Conference of the Academies and High Schools in relations with the University of Chicago.)

Suggested Outline of the Course

I. Introduction.
   1. Nature of geography.
   2. Relations of economic and commercial geography to the subject as a whole.
   3. Geographic factors affecting the production and interchange of commodities.

II. Commodities of commerce: production, transportation, and exchange, as influenced by geographic factors.
   1. Agricultural products.
   2. Live stock products.
   3. Fishery products.
   4. Forest products.
   5. Mineral products.
   6. Manufactured products.

III. Survey of interchange of commodities as influenced by geographic factors.
   1. Geographic basis of exchange.
   2. Geographic relations of the great trade routes of the world.
   3. The trade of type nations as influenced by geographic conditions.
      a. The exporter of raw material: Argentina.
      b. The exporter of manufactured wares: Great Britain.
      c. An intermediate stage: the United States.
      d. The "carrying" nation: the Netherlands.

Discussion of Outline

I. A course in economic and commercial geography should presuppose a knowledge of the elements of physical geography, hence there need be only a brief introduction before taking up the study of commodities. The purpose of this introduction is to give the student a point of view for the course. It should make clear to him the nature of geography, the relations of economic and commercial geography to the subject as a whole, and should suggest those geographic factors whose influence is to be studied in connection with specific products.

II. In part II, the commodities of commerce are grouped under six heads: (1) agricultural products; (2) live stock products; (3) products of the fisheries; (4) products of the forests; (5) mineral products; and (6) manufactured products.

The relation of each group of commodities to the development of regions should be shown clearly. Then from each group important products illustrating different principles should be selected to serve as type studies. For example, studies of the cereals on the one hand and of fruits and vegetables on the other bring out the conditions affecting contrasted types of agricul-

tural products, not only as regards production, but also as regards transportation and exchange.

Agricultural products have been placed first in this grouping because (1) the influence of geographic factors in production can be shown most readily and simply by studies from this group; (2) the average student is likely to be more familiar with agricultural activities than with others; (3) agricultural products form the most important group in world production. Therefore, studies from this group make it possible to show clearly many of the general principles underlying production and exchange and thus to lay a broad foundation for later discussion.

In discussing agricultural commodities, the main points to be brought out are as follows:

1. Conditions of climate, soil, and topography most favorable for production.
2. Regions of large production.
   a. World production.
   b. United States production.

(Note: Are all regions of surplus production regions in which the ideal conditions for production prevail?)

3. Movement of the commodity from regions of surplus production to regions of deficient production.
   a. Reasons for deficient production in certain regions.
   b. Forms in which the commodity is shipped.
   c. Lines of movement.
   d. Relative commercial importance of the commodity to the 1) exporter; 2) importer.
4. Manufacturing industries associated with the commodity. Location of (a) general regions and (b) specific centers, as influenced by character of raw material and other geographic factors.

The question frequently arises whether the geographer is justified at any time in discussing non-geographic factors which may influence production and exchange. Obviously it is necessary to recognize that non-geographic factors may play an important part in production and exchange. When this is the case, such factors should be noted, for without this recognition, the student will be unable to evaluate properly the influence of *geographic* factors. For example, it is not possible to explain the rapid development of cotton culture in the south at the close of the eighteenth and the beginning of the nineteenth centuries, without taking into account the invention and use of the cotton-gin. The student should know that before this invention, the seed had been separated laboriously from the lint by hand, while the use of the cotton-gin enabled one man to do as much as 100 to 200 men could do by hand. It is not necessary, however, that the student should understand the working of the machinery by which this saving of labor was brought about. It may be interesting to some but it is not geography.

Obviously the outline suggested for the discussion of agricultural products would be modified more or less in the discussion of commodities belonging to the other groups.

There is always danger, because of the variety of material which must be used in such a course, that the student may not see things in their proper proportions and that the big things may be obscured by the details. For example, after a study of the leading agricultural products, the teacher may ask, Have the students a fairly good idea as to the relative importance of these different commodities in the production and foreign trade of the United States? And similarly, after a study of the other groups of products, Have the students an adequate notion as to the importance of these products, as compared with each other and with the products of the groups previously discussed? These relationships should be brought out by frequent comparisons and timely summaries.

III. When the study of commodities is completed, the student should have noted for each product the movement from regions of surplus production to regions of deficient production. He should then be able to discover the general principles underlying these exchanges and to understand the lines of the great trade routes of the world.

In the four types of commercial countries and their trade, there is to be found an illustration of the trade of every country.

Argentina is a country whose people are engaged in the early stages of development of its natural resources, thus affording a good example of the country which exports its raw material and imports manufactured products. Others of much the same sort are Canada, Australia, and Brazil.

Great Britain represents the other extreme, a country unable to feed its own people by its own food-products, but supporting them on the basis of its manufactures,—an exporter of manufactured wares, an importer of foodstuffs and raw materials for manufactures. Similar countries are Germany and Belgium.

An intermediate stage is shown by the United States, and a survey of the trade of this country for a period of years demonstrates the gradual transition that is taking place, a decrease in the *relative* importance of farm products exported and a marked increase in the importance of manufactured wares exported, accompanied by increased imports of raw materials and food stuffs.

The fourth type is illustrated well by Holland, a country which because of certain geographic advantages and limitations has built up a large merchant marine and has become a great "carrier" for other countries.

In conclusion, a study such as is outlined here is intended to give the student (1) an adequate notion of the relative significance of *geographic* factors in production and exchange and (2) a clear grasp of the general principles underlying these important activities.

ABOUT OUR COAL MINING INDUSTRY

1. Pennsylvania produces more coal in value than all of the other states combined.

2. Illinois, West Virginia and Ohio, ranking in this order after Pennsylvania, do not produce as much as the bituminous coal output of Pennsylvania alone.

3. Only one state west of the Mississippi River, Colorado, mines as much as 2 per cent of our coal.

4. The United States produces one-third of the world's output of coal.

5. The consumption of anthracite coal in the United States is one ton per capita.

6. Bituminous coal has an average value of only a little over one dollar a ton at the mine and anthracite a value of a little more than two dollars.

7. Coal is mined commercially in 30 states.

8. One-half million square miles, 320 million acres, of the United States are underlain with coal.

9. From two thousand to three thousand coal miners are killed annually in mining operations.

10. Less than 4 per cent of the coal mined in the United States is exported.

11. Although the anthracite coal field (all in eastern Pennsylvania) covers only 480 square miles, it is estimated to have contained 21 billion tons of coal, 16 billion tons of which still are in the ground.

12. For each ton of anthracite mined and sold, a ton has been lost, chiefly by leaving it in the mines to support the rock roof.

13. It is estimated that three trillion tons of coal, 99 per cent of our original supply, still remains in the ground.

14. The Appalachian coal field, extending from Pennsylvania to Alabama is the largest continuous field in the world and contains over 500 billion tons.

15. Nearly 800,000 men are employed in coal mining in the United States. They, with their families, make a larger population than that of Norway, or any one of six South American countries.

16. Of 374 million tons of coal shipped from the mines, 367 million tons were carried by railroads and 7 million by waterways.

17. Of the seven million tons shipped from the mines by waterways, the Monongahela and Kanawha Rivers carried 6 million tons.

18. Ten times as much coal is shipped from the mines by the Pennsylvania R. R. system as by all waterways combined.

19. Since 1899 the production of coal in the United States has increased 100 per cent; in Great Britain, 20 per cent.

20. The United States, Great Britain and Germany produce 80 per cent of the world's coal. —R. H. W.

NOTES

Weakness in Geography Teaching

In an article on "The Formulae of Geography" in the *Kalamazoo Normal Record* of March, 1914, Prof. L. H. Wood discusses some of the elements in the present situation in school geography. He confirms the oft-given testimony that the young people who come to the normal schools are lamentably weak in general geography. He says:

"The lack in geography, as observed most frequently, consists in the absence of any tendency or ability to follow up a geographic sequence on the part of students who readily follow a clue in history, a proposition in geometry, or the steps in a problem in algebra. For example, if the lesson is the climate of New England, the student considers it sufficient to say that the climate is cold in winter, hot in summer, and somewhat modified by the Gulf Stream. If the student is asked why the land is affected by the Gulf Stream when the winds are westerly,—a question intended to bring out the cyclonic storm element, he never seems to have connected the idea of cyclonic storms with the climate of the region and is very apt to confuse the term cyclone with tornado. The conclusion from this and many other like experiences of the class room is that (1) there was no correlation of the elements of geography in the grades, and (2) that the geography of the high school, chiefly physical, scarcely ever comes to its true function, i. e., a preparation for general geography, and that its principles, however well taught, seldom reach their goal in correlation with the facts of plant, animal and human life in the study of a region. * * * This is the great lack in our geography teaching, since the very essence of this subject is found in mental movement that traces the many sequences found in earth relations. Nature makes these correlations and we must follow them in explaining the causes of things."

He holds that geography is a great formula of thought by which we come to answer the double question, "where things are and why they are where they are." After discussing the various formulae of geography—the mathematical, the climatic, the geologic, the ecologic and the human—he concludes with: "Such a study is as worthy of attention for its culture value as any of the subjects that now largely displace it from the curricula of high schools and colleges."

Affairs in China

The announcement has been made that the Republic of China has entered into partnership with the Standard Oil Company for the development of its oil possessions. It would be difficult to exaggerate the importance of such a piece of news. Not only is the contract unique in the history of commerce, but it will supply a leverage for the development of the material resources of China that must add enormously to the potential wealth of the Republic. Perhaps the most pressing need of China today is that of in-

dustrial organization, and here is an object lesson about to be made on a scale of unexampled magnitude, as well as according to a standard of unrivalled efficiency. The success of the Standard Oil Company in supplying the Chinese with a smokeless oil lamp procurable in places the most remote for 7½ cents, amply justifies the claim that they have given China light. They have certainly lengthened the Chinese working day, and to that extent have greatly increased the output of the cottage industries. It is equally within the range of practical achievement that the sinking of oil wells in China itself, with the accompanying building of railroads and pipe lines, should promote the creation of great industrial centres and diversified manufacturing plants.—[*Jour. Am. Asiatic Assn.*]

When 1913 dawned it threatened to be a deplorably bad year for China. The international bailiffs were alleged to have been waiting for a chance to slip into possession and pessimistic publicists unreservedly proclaimed a declaration of bankruptcy to be inevitable. Terrible as have been the financial straits of the Government it has managed to weather the year. How desperate the needs of the country have been, however, were disclosed in the Government's financial statements and it is regrettable to realize that the new year comes without any practical diminution of the difficulties. In fact they have been intensified by a fatuous rebellion which has brought incalculable misery to hundreds of thousands of people and added immensely to the obligations of the State. China staggers under a gradually swelling load of loans, and that burden will have to be increased before it can be lightened. Every provincial treasury is still in a state of poverty, and the Central Government scarcely knows where to turn to find the ready means necessary for administrative purposes and for the settlement of debts due to foreign lenders. What the actual claims against the Government are no one can authoritatively say. In addition to foreign and domestic loans of which the public are aware, there are numerous short term obligations of indefinite amounts. The Government itself set down its requirements for 1913 as $646,350,000.—[*Far Eastern Review.*]

RECENT PUBLICATIONS

A History of Land Mammals in the Western Hemisphere.

By Wm. Berryman Scott. The Macmillan Company, New York, 1913. $5 net. pp. 693, text figs. 304.

In this work the following subjects are discussed in order: The methods of investigation followed in gathering the mass of knowledge concerning extinct mammals, the classification of mammals, the hard anatomy of mammals, the geography of the western hemisphere during the Cenezoic, geographical distribution of mammals, successive mammalian faunas of North and South America, a history of several of the orders of mammals, and "Methods of mammalian evolution."

The treatment of the geographical development of the Americas during Cenezoic times should be of especial interest to the students of geography. Under this head (Chapt. V) the climatic conditions, the continental outlines, and, to a certain extent, the topographic features of the Western Continents are discussed. Of no less interest is Chapter VI, the geographical distribution of mammals. In this chapter are set forth the various elements that determine the distribution of mammals. It also sketches the more striking and characteristic mammals of the western hemisphere of today. Under "The successive mammalian faunas of North and South America" the author departs from the established custom of starting with the early faunas and, to the advantage of the lay reader at least, begins with the later faunas that are similar to those of today and works back to the strange faunas of the early mammalian horizons.

The book, as a whole, presents the rare combination of thoroughly scientific matter compiled by a master hand and a treatment of this material intelligible and exceptionally interesting to the lay reader. M. G. Mehl.

ANIMAL COMMUNITIES IN TEMPERATE AMERICA. By Victor E. Shelford, University of Chicago. XIII+362 pages. University of Chicago Press, 1911. $3.00 net. Postage 20 cents.

A carefully worked-out, fully illustrated book, attractive in appearance and including a most excellent bibliography.

Professor Shelford has presented in his book the results of a study not alone of the literature of the subject, but of a large amount of field work particularly in the Chicago region. He treats the subject under such heads as: The Animal Environment, Animal Communities of a Large Lake, of Streams, of Small Lakes, of Ponds, of the Tension Line between Land and Water, of Swamps, of Forests and Forest Margins, and of Prairies. This book adds one more to the growing list of studies which are furnishing the geographer with the necessary data out of which to construct a real Science of Geography.

PREHISTORIC TIMES. By the late Rt. Hon. Lord Avebury. 7th Edition, revised and entirely reset. 623 pages; about 300 illustrations. Henry Holt and Co., New York, 1913. $3.50 net.

Shortly before his death, Lord Avebury carefully revised the preceding edition of the book, making such additions as recent discoveries called for. The book now consists of sixteen chapters in which the author traces with great care the evolution of man and of culture from the earliest times of which any gleam of information is obtainable. The reader who is not versed in this sort of lore, is much surprised at the enormous number of relics of prehistoric times found in certain places. For example, over 20,000 bronze articles have been found in the ancient lake settlements of Bienne and Neufchatel, and an equal number in parts of France. The Bronze Age

marks a great advance over the Stone Age. The author estimates that the Bronze Age in Northern Europe commenced about 2500 B. C.

When it is recalled that, in the very nature of things, only a relatively few of the relics of prehistoric days are found and yet that a single museum in Copenhagen has over 12,000 stone implements collected, for the most part, in Denmark, one can not help wondering how populous were these European lands long ago.

In the chapter on the Antiquity of Man, a great amount of data is brought together in an effort to shed light upon the length of time involved in accomplishing certain changes, such, for example, as the building of the Mississippi delta, or the eroding of the Niagara gorge. Through such studies it is hoped that some clue to the antiquity of man in certain regions may be obtained.

The latter chapters deal with tribes and peoples of low culture with whom our civilization has actually come into contact,—their religious and social practices, languages, industries and peculiarities. The author believes that the principal *varieties* of man are of very great antiquity, in fact, go back almost to the origin of the human race.

While this volume properly belongs to another science than geography, it contains a vast amount of material in which the scientific geographer is intensely interested.

THE REPUBLICS OF CENTRAL AND SOUTH AMERICA, THEIR RESOURCES, INDUSTRIES, SOCIOLOGY AND FUTURE. By C. Reginald Enock, F. R. G. S. 544 Pages, Plates and Colored Maps. Charles Scribners Sons. New York, 1913.

This volume would answer well the purpose of a text book for college classes in the Geography of Latin America, and it is an excellent book of reference for any teacher or other worker in the field of geography. It is not a traveller's narrative but a book of timely information, apparently based, in considerable part, upon the writer's observations. It is interesting to read; it moves along rapidly; each paragraph carries you forward. You feel that you are reading to a purpose and that you are getting the sort of information that gives you a basis for judging the peoples of Latin America. A full chapter is given to each of the important countries, while all of the Central American states are grouped in one chapter. In addition, chapters are given to the Amazon Valley, the Incas, the Aztecs, and to Foreign Relations, Colonization and Commerce.

ATLAS DE LA PLUS GRANDE FRANCE. By Onesime Reclus. In process of publication by Attinger Freres, Editors, 2, rue Antoine Dubois, Paris, France. 160 quarto plates in colors, 160 pages of text. For advance orders 76 francs, bound.

This Atlas of Greater France contains 12 general maps, 45 regional maps, 87 maps of departments and 16 colonial maps. Altogether 160 plates

in colors. France is shown in 16 regions, for each of which there is (1) a physical map, (2) a map showing agricultural and mineral products, (3) a map showing manufacturing industries, commerce, and routes of transportation and communication, (4) a geologic map in the text. Further, there are ten general maps of France giving the latest information regarding climate, population, the army, sociology, and other conditions of human geography. The political geography is shown by departments, 87 maps giving prefectures, cantons and even the smallest villages.

In explanation of these maps M. Reclus has put on the reverse of each a page of about 250 lines of text, making a volume of 40,000 lines; a geography of France based on the most recent geographic surveys and illustrated by cuts, diagrams and plans of all sorts.

The atlas is well put up and is so admirably arranged and so thoroughly reliable as to be as valuable for scientific as for popular use. V. C. F.

SUMMER COURSES IN GEOGRAPHY

By F. E. Williams
University of Wisconsin

The following is an incomplete list of universities giving summer courses in geography. We have not succeeded up to date in securing the necessary information from all the Universities to which we wrote, and some may have been overlooked in our inquiries. Many normal schools and colleges are also offering summer courses, and such of them as have sent in the necessary data are also listed. The use of the titles, Mr. and Professor differs in different institutions.

University of California, Berkley

General Physical Geography: The Lands and the Planetary Relations of the Earth, Mr. Reed.

General Physical Geography: The Atmosphere and the Ocean, Mr. Reed.

University of Chicago

The Elements of Geography, Professor Barrows, Associate Professor Tower and Miss Lanier.

Economic and Commercial Geography, Associate Professor Tower.

Geography of North America, Miss Lanier.

Influence of Geography on American History, Miss Lanier.

Conservation of Natural Resources, Professor Barrows.

Geography of South America, Associate Professor Tower.

Geographic Influences in the History of the Interior, Professor Barrows.

Field Geography. Four weeks will be spent in the Cumberland Plateau and the Southern Appalachians, commencing August 29, Professor Barrows.

Research Course, Advanced Work, Professor Barrows and Associate Professor Tower.

The School of Education of Chicago University offers courses in:

Geography in the Primary Grades, Miss Henderson.

Geography in the Grammar Grades, Eurasia, Miss Henderson.

Geography in the High School, Miss Henderson.

COLUMBIA UNIVERSITY, NEW YORK, N. Y.

Physical Geography and its Economic Aspects, Professor D. W. Johnson and Mr. Knight.

Physiography of the Eastern United States, Professor D. W. Johnson and Mr. Knight.

Commercial Geography, Professor McFarlane.

Geography of Industry and Trade, Professor McFarlane.

The Teachers' College of Columbia University offer courses in:

The Teaching of Geography in Elementary Schools, Professor Dodge.

Geography for Rural Schools, Professor Dodge.

Man and his Geographic Environment, Professor Dodge.

CORNELL UNIVERSITY, ITHACA, N. Y.

Round Table Conference in Geography and Geology. Three or four evening conferences on the Teaching of Geography and Geology.

Physical Geography, Assistant Professor von Engeln.

Physical Geography, Laboratory Course, Mr. Elston.

Industrial and Commercial Geography. United States and other leading commercial nations; adapted to the needs of teachers in high and grammar schools, Professor Carney.

Geography of North America, Assistant Professor von Engeln.

Aims and Methods in Geography, Professor Carney.

UNIVERSITY OF COLORADO, BOULDER

Physical Geography, Associate Professor Mc Court.

Geographic Influences, Associate Professor Mc Court.

General Geology, Associate Professor Mc Court.

DENISON UNIVERSITY, GRANVILLE, OHIO

Teachers' Course in Geography, Mr. Davis.

Physical Geography, Mr. Davis.

GEORGE PEABODY COLLEGE FOR TEACHERS, NASHVILLE, TENN.

Teaching of Geography for Primary Grades, Miss Brasher.

Teaching of Geography for Upper Grades, Miss Brasher.

Commercial and Industrial Geography, Professor Gregory.

Physical and Regional Geography, Professor Gregory.

Methods and Problems in the Teaching of Geography, Professor Gregory.

Excursions to Mammoth Cave, Round Top, and the Great Valley under direction of Professor Gregory.

HARVARD UNIVERSITY, CAMBRIDGE, MASS.

Field Work in the Rocky Mountains, Montana, Associate Professor Woodworth.

Physiographic Field Studies, Professor Atwood.

Structural or Glacial Field Work, Professor Woodworth.

INDIANA UNIVERSITY, BLOOMINGTON, IND.

Physical Geography, Professor Cumings.

Conservation of Natural Resources, Professor Cumings.

Advanced Field Work, Continuous Work in the Field, Associate Professor Beede.

UNIVERSITY OF IOWA, IOWA CITY

Physical Geography for Teachers, Professor Calhoun and Mr. Williams.

Geology of Soils, Professor Calhoun and Mr. Williams.

Field Course in Geology in Driftless Area, Professor Trowbridge.

THE UNIVERSITY OF MINNESOTA, MINNEAPOLIS, MINN.

General Geology, Mr. Posey.

Geography of Eurasia, Mr. Posey.

Field Course on the Geography and Geology of Minnesota. Four weeks field work from June 22 to July 4, and from July 13 to July 25, Mr. Lehnerts.

Field Work in the Yellowstone and Glacier National Parks, July 27 to August 15, Mr. Lehnerts.

THE UNIVERSITY OF MISSOURI, COLUMBIA

Physical Geography. Preparatory for Teachers' Certificates, Mr. Shutts.

Physiography, Mr. Branson.

Field Course. Study of an area in Colorado or Wyoming, making a topographic map of same, and mapping areal geology, Mr. Tarr.

UNIVERSITY OF NEBRASKA, LINCOLN

Physical Geography, Assistant Professor Filley and Mr. Eaton.

Industrial Geography, Assistant Professor Filley and Mr. Eaton.

General Geography, especially designed for teachers in grades and rural schools, Mr. Eaton.

Agricultural Geography of Nebraska, Assistant Professor Filley.

Graduate Work, Head Professor Condra.

Conferences: Round Table Conferences concerning problems of teachers of geography in the grades and high school, conducted by members of the department.

Geological Excursion. Six Weeks in the Black Hills and Rocky Mountain Region, Professor Barbour, Assistant Professor Schramm.

UNIVERSITY OF NORTH CAROLINA, CHAPEL HILL

General Geography, Mr. Smith.

Geography for Secondary Schools, Mr. Smith.

Field Course, Study of the peneplain of middle North Carolina, Mr. Cobb.

UNIVERSITY OF NORTH DAKOTA, GRAND FORKS

The summer courses in Physiography are given at the Biological Station, Devils Lake.

Physiography, Assistant Professor Simpson.

Field Geology, Assistant Professor Simpson.

OBERLIN COLLEGE, OBERLIN, OHIO

Field Geology. Field located where New River cuts through Applachian Mountains, Professor Hubbard.

UNIVERSITY OF OHIO, ATHENS

Physiography, Mr. Thompson.

General Geography, Mr. Thompson.

Methods of Geography, Professor Martzolff.

UNIVERSITY OF PENNSYLVANIA, PHILADELPHIA

Commercial Geography of the United States, Mr. Roorbach.

Physical and Economic Geography, Mr. Roorbach.

Resources and Industries of South America, Mr. Roorbach.

SUMMER SCHOOL OF THE SOUTH, UNIVERSITY OF TENNESSEE, KNOXVILLE

Elementary Geography, Miss Warren.

Commercial and Industrial Geography, Miss Warren.

Physical Geography, Miss Warren.

Teaching of Geography in Grammar Grades, Miss Spaulding.

UNIVERSITY OF SOUTHERN CALIFORNIA, LOS ANGELES

The Teaching of Geography, Professor Chamberlain.

The Geography of the United States, Professor Chamberlain.

UNIVERSITY OF VIRGINIA, CHARLOTTESVILLE

Physical Geography, Professor Bishop.

Industrial Geography, Professor Bishop.

Aims and Methods in Geography, Professor Bishop.

Primary and Grammar School Geography, Professor Johnson.

UNIVERSITY OF WASHINGTON, SEATTLE

Assistant Professor Saunders gives a Traveling Course, making short journeys to interesting points in Western Washington.

UNIVERSITY OF WISCONSIN, MADISON

Elementary Geology, Associate Professor Martin.

Geography of Europe, Associate Professor Martin.

Regional Geography, Associate Professor Martin.

Commercial and Industrial Geography, Associate Professor Whitbeck.

Physical and Applied Geography, Associate Professor Whitbeck.

Summer Field Course in Physiography and Geology, four weeks in August, beginning after close of summer session. Study of various areas of southern Wisconsin, Associate Professor Martin.

NORMAL SCHOOLS

In the February Journal we announced our willingness to publish notices of all courses in geography offered in normal schools, providing the necessary data were supplied us. We regret that only a few schools have sent in the data.

California

SAN DIEGO NORMAL SCHOOL

Courses in physical and applied geography, Miss Vinnie Bell Clark.

Illinois

MACOMB NORMAL SCHOOL

1. Geography Methods.
2. Elementary Geology.
3. Regional Geography.
4. Country School Geography.

The courses will be in charge of Professor Bassett and an assistant.

NORMAL UNIVERSITY, NORMAL

(The number after each course signifies whether given in first or second term.)

1. Physical Geography (1), Mr. Russell.
2. Method in Geography (1), Mr. Ridgley.
3. Home Geography (1), Miss Stark.
4. Intermediate Geography (1 and 2), Miss Robb, Miss McClellan.
5. Geography of North America (1), Miss Robb.
6. South America (1), Miss Stark.
7. Conservation of Natural Resources (1), Mr. Ridgley.
8. Commercial Geography (1 and 2), Miss Stark and Miss McClellan.
9. Geography of Europe (2), Miss McClellan.

Minnesota

MANKATO NORMAL SCHOOL

1. Elementary School Geography to prepare teachers for state examinations.
2. Elementary Physical Geography.
3. Teachers' Geography.
4. North America, with special emphasis on the United States and industrial geography. Prerequisite, course 3.

Courses in charge of Mr. Geo. J. Miller and Mr. Arthur D. Whedon.

THE INDEX

ADD A DAY OR DROP A DAY? Charles Stratton, 323.

AGE OF THE EARTH, The, W. M. Davis, 70.

AMERICAN GEOGRAPHICAL SOCIETY AND ASSOCIATION OF AMERICAN GEOGRAPHERS, Joint Meeting of, (Note) 331.

AMERICAN GEOGRAPHERS, The Association of, 183.

ARAB, The, (Note) 187.

ARGENTINA, Sugar in, (Note) 218.

Astronomy, A Popular Handbook of, by Harold Jacoby, (Note) 160.

Athens and Its Monuments, by Charles H. Weller, (Review) 188.

ATMOSPHERE AND CLIMATE, 100 Review Questions on, 190.

ATLANTA, How Physiographic Features have Contributed to the Growth of, (Note) 327.

BALKANS, Territorial Changes in the, (Note, with Map) 156.

BAVARIAN TREES, (Note) 187

BEAN, E. F., Bibliography of Publications on Wisconsin, 296.

BLACKBOARD MAPS, L. P. Denoyer, 127.

BOOTH, MARY J., Geographical Material which may be obtained free or at small cost, 129.

BRABAND, LILLA, The Mineral Industries of Wisconsin, 254.

BRITISH CHANNEL TUNNEL, The, (Note) 217.

BRITISH UNIVERSITIES, The Position of Geography in, George G. Chisholm, 65.

BRIGHAM, ALBERT PERRY, Remarks on Geography in America, 202.

BROWN, ROBERT M., Notes on Wall Maps, 208.

CACTI AS EMERGENCY FORAGE, (Note) 213

CALIFORNIA, Relation of the Climate of to the Japan Current, William G. Reed, 205

Carolina Mountains, The, by Margaret W. Morley, (Review) 188

CHILI, The Commerce of, (Note) 214

CHINA, Affairs in, (Notes) 356.

————, Coal in, (Note) 57

————, The Loess Deposits of, (Note) 56

————, The Preparation of Salt on the Fukien Coast, Walter N. Lacy, 322.

————, Some Significant Facts in the Geography of, G. B. Roorbach, 45

————, Use of the Rivers in, (Note) 55

CHINESE MONEY, (Note) 57

CHISHOLM, GEORGE G., The Position of Geography in British Universities, 65

————, Is the Increasing Control of Man over Nature making him Independent of Geographical Conditions? 97

CLIMATE OF CALIFORNIA, The Japan Current and the, William G. Reed, 205

CLIMATE, Little Studies in, 87

———— and Atmosphere, 100 Review Questions on, 190

———— of Florida, in Relation to the State's most Important Industry, J. W. Hubbard, 106

CLOVES, (Note) 186

COAL MINING INDUSTRY OF THE UNITED STATES, 355

COLORADO, Nile and Susquehanna, The, (Note) 28

COLLIE, GEORGE L., The Port of Shanghai, 51

COMMERCIAL GEOGRAPHY, Current Material for, 324

————, The Subject Matter for an Elementary Course in, Mary J. Lanier, 351

COMMERCIAL GEOGRAPHY COURSE, Industries as Studies for High School Pupils in a, Sumner W. Cushing, 113

COMMERCE OF UNITED STATES, 19

CONTENT OF SCHOOL GEOGRAPHY, 344

COST OF REVISING GEOGRAPHIES, (Note) 156

COTTON GOODS TRADE OF THE WORLD, Our Part in, (Note) 326

CROMWELL, ARTHUR D., Observations in Porto Rico, 314

CUBA, Commercial, (Note) 214

CUSHING, SUMNER W., Industries as Studies for High School Pupils in a Commercial Geography Course, 113

DAKE, C. L., Iron, 165

————, Gold, 197

————, Petroleum, 9

DAVIS, W. M., The Age of the Earth, 70

DAVIDSON, K. W., Man and Nature in the Making of Three Great Harbors, 82

DENOYER, L. P., Blackboard Maps, 127

DENMARK, The Message of, George S. Wehrwein, 58

————, Geographical Influences in the Delevopment of, 177

DODGE, RICHARD ELWOOD, The Modern Point of View in Geography Teaching, 161

DRIFTLESS AREA OF WISCONSIN, The C. E. Slothower, 267

EARTH, The Age of, 16

ECONOMIC GEOGRAPHY, The Subject Matter for an Elementary Course in, Mary J. Lanier, 351

EIRICH, CONSTANCE GRACE, The Establishing of the Ohio-Michigan Boundary Line, 5

Eskimo, My Life with the, by Vilhjalmur Stefansson, (Review) 159
Europe, The Continent of, by Lionel W. Lyde, (Review) 158
EXPORT TRADE OF LATIN AMERICA, Peculiarities in, (Notes) 64
FARM PRODUCTS, Government Investigation of the Marketing of, (Notes) 218
Farmers of Forty Centuries, by F. H. King, (Review) 63
FIELD WORK IN GEOGRAPHY, The Question of, Walter S. Tower, 345
FLOODS OF THE OHIO AND MISSISSIPPI VALLEY, Notes on, R. DeC. Ward, 313
FLORIDA, The Climate of, in Relation to the State's most Important Industry, J. W. Hubbard, 106
FOREST RESOURCES AND INDUSTRIES OF THE UNITED STATES, Suggestions for a Study of, 29
FREEMAN, O. W., Yogo Sapphire Mines of Montana, 219
FRENCH UNIVERSITIES, The Teaching of Geography in, Lucien Gallois, 40
FROST, as related to Climate, 87
France, Atlas of, (Note) 359
GALLOIS, LUCIEN, The Teaching of Geography in French Universities, 40
GEOGRAPHY IN SECONDARY SCHOOLS, The Subject Matter of, C. F. Knirk, 178
———— in British Universities, George G. Chisholm, 65
———— in French Universities, The Teaching of, Lucien Gallois, 40
———— in America, Remarks on, Albert Perry Brigham, 202
———— Teaching, The Modern Point of View in, Richard Elwood Dodge, 161
———— Teaching, Weakness in, (Note) 356
————, The Multiplication Tables of W. A. Owens, 13
GEOGRAPHICAL CONTROL. Is the Increasing Control of Man over Nature making him independent of Geographical Conditions? George G. Chisholm, 97
GEOGRAPHICAL MATERIAL which may be obtained free or at small cost, Mary J. Booth, 129
GEOGRAPHICAL INFLUENCES IN THE DEVELOPMENT OF SCANDINAVIA, Frederick Homburg, 175
GEOGRAPHICAL CONTROL OF TRANSPORTATION IN THE SOUTHEAST, John E. Smith, 302
GEOGRAPHICAL INSTRUCTION IN GERMANY, Joseph Partsch, 119
GEOGRAPHICAL REFERENCE BOOKS, List of, 60
GERMANY, The Waterways of, Charles E. Spencer, 1
————, Geographical Instruction in, Joseph Partsch, 119
———— and the Germans, by Price Collier, (Review) 62
Globes and Maps in Elementary Schools, A Teachers' Manual, by Leon O. Wiswell, (Review) 90
GOLD, C. L. Dake, 197
GOODE PHYSICAL WALL MAPS AND POLITICAL WALL MAPS (Note) 160
GOULD, L. T., The Making of Milwaukee, 279
GRADE TEACHERS OF GEOGRAPHY, One way of Aiding the, 184
GREAT LAKES IN A COLD WAVE, The, Mark Jefferson, 221
Guide to the Study of Animal Ecology, by Charles C. Adams, (Note) 224
HARBORS, Man and Nature in the Making of Three Great, K. W. Davidson, 82
HISTORICO-GEOGRAPHY, A Study in, Constance Grace Eirich, 5
HISTORIC MOUNTAIN PASSES OF THE WORLD, Minnie J. Langwill, 193
HOMBURG, FREDERICK, Geographical Influences in the Development of Scandinavia, 175
————, The Saone-Rhone Valley, 80
HUBBARD, J. W., The Climate of Florida in Relation to the State's most Im..portant Industry, 106
HUMAN SIDE OF GEOGRAPHY, The, 349
INDUSTRIAL GEOGRAPHY. An Excursion to the Illinois Steel Mills, Milwaukee, Louise W. Mears, 117
Industrial and Commercial Geography, by J. Russell Smith, (Review) 122
INDUSTRY, Where to Locate an, (Note) 328
INDUSTRIES AS STUDIES FOR HIGH SCHOOL PUPILS IN A COMMERCIAL GEOGRAPHY COURSE, Sumner W. Cushing, 113
IRON, C. L. Dake, 165
IRRIGATION IN THE UNITED STATES, (Notes on) 157
IVORY, (Notes) 186
JAPAN CURRENT AND THE CLIMATE OF CALIFORNIA, The, William G. Reed, 205
JEFFERSON, MARK, The Great Lakes in a Cold Wave, 221
KATMAI, Mount, Meteorological and Climatic Consequences of the Eruption of, 152
KNIRK, C. F., Suggestions on the Selection of Subject Matter in Secondary School Geography, 178
LABORATORY MAP EXERCISE ON THE WORLD AS A WHOLE, 123
LANIER, MARY J., The Subject Matter for an Elementary Course in Economic and Commercial Geography, 351
LANGE, EDWARD G., Dairying in Wisconsin, 241
LANGWILL, MINNIE J., Historic Mountain-Passes of the World, 193

LATIN AMERICA, Peculiarities in the Export Trade of, (Notes) 64
LEIPZIG—The Sun of Parallel Forces, Eugene Van Cleef, 170
LIVERPOOL, The Harbor of, 84
Lucita, a Child's Story of Old Mexico, by Ruth Gaines, (Review) 90
Manual of Physical Geography Excursions, by Messrs. Martin, Williams, and Bean, (Note) 160
Man and His Conquest of Nature, by Marion I. Newbigin, (Review) 64
MAP DRAWING, (Notes) 155
MAP EXERCISE ON THE WORLD AS A WHOLE, 123
MARTIN, LAWRENCE, The Physical Geography of Wisconsin, 226
MATERIAL ON GEOGRAPHY which may be obtained free or at small cost, Mary J. Booth, 129
MATHEMATICAL GEOGRAPHY, Review Questions, Louise W. Mears, 93
MEARS, LOUISE W., An Excursion to the Illinois Steel Mills, Milwaukee, 117
————, Review Questions in Mathematical Geography, 93
MEAT PRODUCTION, The Outlook for, (Note) 215
McMURRAY, CHARLES, Vienna (341)
MERRILL, J. A., The Port of Superior, 289
METEOROLOGY, Notes on, R. DeC. Ward, 152
————, by W. I. Milham, (Review) 31
MEXICO, The Resources of, 212
————, Current Information about, 210
MILWAUKEE, An Excursion to the Illinois Steel Mills of, Louise W. Mears, 117
————, The Making of, L. T. Gould, 279
MINNEAPOLIS, The Story of, by E. Dudley Parsons, (Note) 332
MODERN POINT OF VIEW IN GEOGRAPHY TEACHING, The, Richard Elwood Dodge, 161
MORSE, JOSEPH F., Teaching Seasons without Globes, 317
MOUNTAIN-PASSES, Historic, Minnie J. Langwill, 193
NEW YORK, The Harbor of, 82
NILE, Colorado, and Susquehanna, The, (Note) 28
NORTH SEA SHIPPING, (Note) 329
NORWAY; A New Industrial Nation, (Note) 24
NORWAY, Geographical Influences in the Development of, 175
OASES OF THE SAHARA, (Note) 27
Ocean, The Depths of the, by Sir John Murray and Dr. Johan Hjort, (Review) 189
Ocean, The, by Sir John Murray (Review) 188
OHIO-MICHIGAN BOUNDARY LINE, The Establishing of, Constance Grace Eirich, 5
OWENS, W. A., The Multiplication Tables of Geography, 13
PACKARD, LEONARD O., Russian Expansion and the Long Struggle for Open Ports, 33
Panama Canal, The, by John Barrett, (Note) 219
PANAMA AND THE CANAL, (Note) 215
PARTSCH, JOSEPH, Geographical Instruction in Germany, 119
PETROLEUM, C. L. Dake, 9
PLACE GEOGRAPHY, The Problem of, Douglas C. Ridgley, 333
————, List of Places recommended for use in the Springfield, Illinois, Schools, 337
PORTO RICO IN 1913, Progress of, (Note) 214
————, Observations in, Arthur D. Cromwell, 314
PORT OF SHANGHAI, The, George L. Collie, 51
POSEY, C. J., Some Points in the Geography of South America, 74
Principles and Methods of Teaching Geography, by Frederick L. Holtz, (Review) 122
QUESTIONS, in Mathematical Geography, Louise W. Mears, 93
QUESTIONS on the Atmosphere and Climate, 190
RAILROADS AS THE PROMOTERS OF FARMING, (Note) 26
REED, WILLIAM G., The Japan Current and the Climate of California, 205
REGIONAL GEOGRAPHY, The Vocational Aspect of, W. J. Sutherland, 308
Representative Cities of the United States, by Caroline W. Hotchkiss, (Review) 90
RIDGLEY, DOUGLAS C., The Problem of Place Geography, 333
RIVERS OF THE UNITED STATES—Twenty Whys, 18
ROORBACH, G. B., Some Significant Facts in the Geography of China, 45
Russia, Changing, by Stephen Graham, (Note) 160
RUSSIAN EXPANSION AND THE LONG STRUGGLE FOR OPEN PORTS, Leonard O. Packard, 33
SAHARA, Oases of the, (Note) 27
SALEM NORMAL SCHOOL GEOGRAPHICAL EXHIBITION, (Note) 331
SALT, on the Fukien Coast, China, The Preparation of, Walter N. Lacy, 322
SAN DIEGO, CAL., Climate and Weather of, (Note) 4
SANTA FE TRAIL, The, (Note) 153
SAONE-RHONE VALLEY, The, Frederick Homburg, 80
SAPPHIRE MINES OF MONTANA, O. W. Freeman, 219

SCANDINAVIA, Geographical Influences in the Development of, Frederick Homburg, 175
SEA CAVES AT LA JOLLA, CALIFORNIA, Huldah L. Winsted, 125
SEASONS, Teaching without Globes, Joseph F. Morse, 317
SHANGHAI, The Port of, George L. Collie, 51
SLOTHOWER, C. E., The Driftless Area of Wisconsin, 267
SMITH, JOHN E., Geographic Control of Transportation in the Southeast, 301
SNOWFALL CHART OF THE UNITED STATES, (Note) 153
SOUTH AFRICA, Geography as a College Study in, (Note) 220
South America, by J. F. Chamberlain and A. H. Chamberlain, (Review) 224
SOUTH AMERICA, Some Points in the Geography of, C. J. Posey, 74
————, Trade of, (Note) 324
South America, by W. H. Koebel, (Review) 159
SOUTHEAST, Geographic Control of Transportation in the, John E. Smith, 301
SPENCER, CHARLES E., The Waterways of Germany, 1
STATE NAMES, Alphabetical Distribution of, Karl Boecklen, 322
STICKLE, B. A., The Influence of the Mississippi River in the Development of Wisconsin, 274
STRATTON, CHARLES, Add a Day or Drop a Day? 323
Structural Geology, by C. K. Leith, (Note) 160
SUBJECT MATTER IN SECONDARY SCHOOL GEOGRAPHY, Suggestions on the Selection of, C. F. Knirk, 178
SUMMER COURSES IN GEOGRAPHY, F. E. Williams, 360
SUMMER EXCURSIONS IN GEOGRAPHY AT CORNELL UNIVERSITY, (Note) 331
SUPERIOR, WISCONSIN, The Port of, J. A. Merrill, 289
SUSQUEHANNA, Colorado, and Nile, The, (Note) 28
SUTHERLAND, W. J., The Vocational Aspect of Regional Geography, 308
SWEDEN, Geographical Influences in the Development of, 176
Teaching of Geography in Elementary Schools, The, by Richard E. Dodge and Clara B. Kirchwey, (Review) 223
TEXT BOOKS IN GEOGRAPHY; What is a Standard School Geography? 20
TOPICAL OUTLINE FOR THE STUDY OF IMPORTANT COUNTRIES, 90
TOPOGRAPHIC MAPS, A Cheap and Convenient Re-enforcement for, (note) 24
TOWER, WALTER S., The Question of Field Work in Geography, 345
Turkestan, The Duab of, by W. R. Rickmers, (Review) 32
UNITED STATES, Commerce of, 19
VAN CLEEF, EUGENE, Leipzig—The Sum of Parallel Forces, 170
VIENNA, Charles McMurry, 341
WALL MAPS, Notes on, Robert M. Brown, 208
WARD, R. DEC., Notes on the Ohio and Mississippi Valley Floods, 313
————, Notes on Meteorology, 152
WATERWAYS OF GERMANY, The, Charles E. Spencer, 1
WATSON, C. F., The Lumbering and Wood-working Industries of Wisconsin, 235
Weather Science, by R. G. K. Lempfert, (Review) 31
WEHRWEIN, GEORGE S., The Message of Denmark, 58
WELLES, W. S., The Agricultural Industries of Wisconsin, 248
WEST VIRGINIA COAL, (Note) 219
WHITBECK, R. H., The Manufacturing Industry of Wisconsin, 257
WHYS IN ELEMENTARY GEOGRAPHY; Questions on Rivers of the United States, 18
WILLIAMS, F. E., The Climate of Wisconsin, 232
————, Summer Courses in Geography, 360
WINSTED, HULDAH L., The Sea Caves at La Jolla, California, 125
Wisconsin, The Geography and Industries of, by R. H. Whitbeck, (Note) 160
WISCONSIN, The Agricultural Industries of, W. S. Welles, 248
————, Bibliography of Publications on, E. F. Bean, 296
————, The Climate of, F. E. Williams, 232
————, Dairying in, Edward G. Lange, 241
————, The Driftless Area of, G. E. Slothower, 267
————, The Influence of the Mississippi River in the Development of, B. A. Stickle, 274
————, The Lumbering and Woodworking Industries of, C. F. Watson, 235
————, The Manufacturing Industry of, R. H. Whitbeck, 257
————, The Making of Milwaukee, L. T. Gould, 279
————, The Mineral Industries of, Lilla Braband, 254
————, The Physical Geography of, Lawrence Martin, 226
————, The Port of Superior, J. A. Merrill, 289
————, The Winnebago and Lower Fox River Valley of, W. R. McConnell, 262
YOGO SAPPHIRE MINES, Montana, O. W. Freeman, 219
YOKOHAMA, The Harbor of, 85

GENERAL LIBRARY
JUN - 8 1914

This Issue Contains the Table of Contents and Index For Volume XII.

The JOURNAL of GEOGRAPHY

VOLUME XII — *JUNE*, 1914 — NUMBER 10

A MONTHLY MAGAZINE Devoted to the Interests of Teachers of Geography in Elementary, Secondary and Normal Schools

RAY HUGHES WHITBECK, *Editor* LAWRENCE MARTIN, *Associate Editor*

Of the Department of Geology and Geography of the University of Wisconsin

CONTENTS FOR JUNE

		Page
The Problem of Place Geography	*DOUGLAS C. RIDGLEY*	333
Vienna	*CHARLES A. McMURRY*	341
What Shall School Geography Include?		344
The Question of Field Work in Geography	*WALTER S. TOWER*	345
The Subject Matter for an Elementary Course in Economic and Commercial Geography	*MARY J. LANIER*	351
About the Coal Mining Industry		355
Notes: Weakness in Geography Teaching, (356); *Affairs in China*		356
Recent Publications		357
Summer Courses in Geography	*F. E. WILLIAMS*	360

AUTHORS ARE PERSONALLY RESPONSIBLE FOR OPINIONS AND STATEMENTS EXPRESSED IN *THE JOURNAL*

$1.00 A Year — THE JOURNAL OF GEOGRAPHY — 15c A Copy

V. C. FINCH, Business Manager

University of Wisconsin, Madison, Wis.

Entered at the Post Office, Madison, Wis., as second class mail matter Sept. 9, 1910

The Journal of Geography

Published Monthly except July and August

Successor to the Journal of School Geography, Vol. V, and the Bulletin of the American Bureau of Geography, Vol. II.

Editor
RAY HUGHES WHITBECK.

Associate Editor
LAWRENCE MARTIN.

Of the Department of Geology and Geography, University of Wisconsin.

Contributing Editors, 1913-14

ISAIAH BOWMAN, Assistant Professor of Geography, Yale University.
JAMES F. CHAMBERLAIN, Professor of Geography, State Normal School, Los Angles, Cal.
W. N. CLIFFORD, Southern High School, Philadelphia, Pa.
GEORGE E. CONDRA, Professor of Geography, University of Nebraska.
RICHARD E. DODGE, Professor of Geography, Teachers College, New York.
WILLIAM M. DAVIS, Professor of Geology, Harvard University.
PHILIP EMERSON, Principal Cobbet Grammar School, Lynn, Mass.
N. M. FENNEMAN, Professor of Geology, University of Cincinnati.
WILLIAM M. GREGORY, Professor of Geography, Normal School, Cleveland, O.
J. PAUL GOODE, Associate Professor of Geography, University of Chicago.
MARK JEFFERSON, Professor of Geography, State Normal College, Ypsilanti, Mich.
EDWARD M. LEHNERTS, Assistant Professor of Geology and Geography, University of Minnesota.
CHARLES A. McMURRY, Professor of Psychology and Pedagogy, State Normal School, De Kalb, Ill.
EDWARD VAN DYKE ROBINSON, Professor of Economics, University of Minnesota.
WILLIAM J. SUTHERLAND, President State Normal School, Platteville, Wis.
ROBERT DeC. WARD, Professor of Climatology, Harvard University.

Contributing Editors for Great Britain and Germany.

A. J. HERBERTSON, Reader in Geography, Oxford University.
MARTHA K. GENTHE Chemnitz, Germany.

RULES OF PUBLICATION:

PRICE—The subscription price is one dollar a year, payable in advance. Fifteen cents a copy.

POSTAGE IS PREPAID by the publisher for all subscriptions in the United States, Hawaiian Islands, Philippine Islands, Guam, Porto Rico, Tutuila, Samoa, Canada, and Mexico. For all other countries in the Universal Postal Union add forty cents for postage.

CHANGE OF ADDRESS—When a change of address is ordered, both the new and the old address must be given. The notice should be sent ten days before the change is to take effect. Subscribers who fail to give notice of change are responsible for payment for all copies sent until notice is received. The post-offices do not forward second-class mail matter. Subscribers who do not observe this rule will not be sent duplicate copies.

DISCONTINUANCES—If a subscriber wishes his magazine discontinued at the expiration of his subscription, notice to that effect should be sent direct to the publisher, never to an agent. Otherwise it is assumed that a continuation is desired. Do not ask the publisher to discontinue your subscription without paying all arrearages.

HOW TO REMIT—Remittance should be sent by Check, Draft, Express Order, or Money Order, payable to order of The Journal of Geography. It is, as a rule, safe to send a dollar bill without registering, but sender must assume the risk. Larger amounts should not be sent in cash.

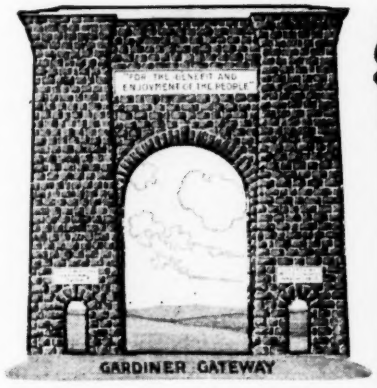
THE JOURNAL OF GEOGRAPHY

V. C. FINCH, Business Manager

University of Wisconsin, Madison, Wis.

EDUCATION

To be symmetric and well rounded out combines enlightened travel with scholastic learning

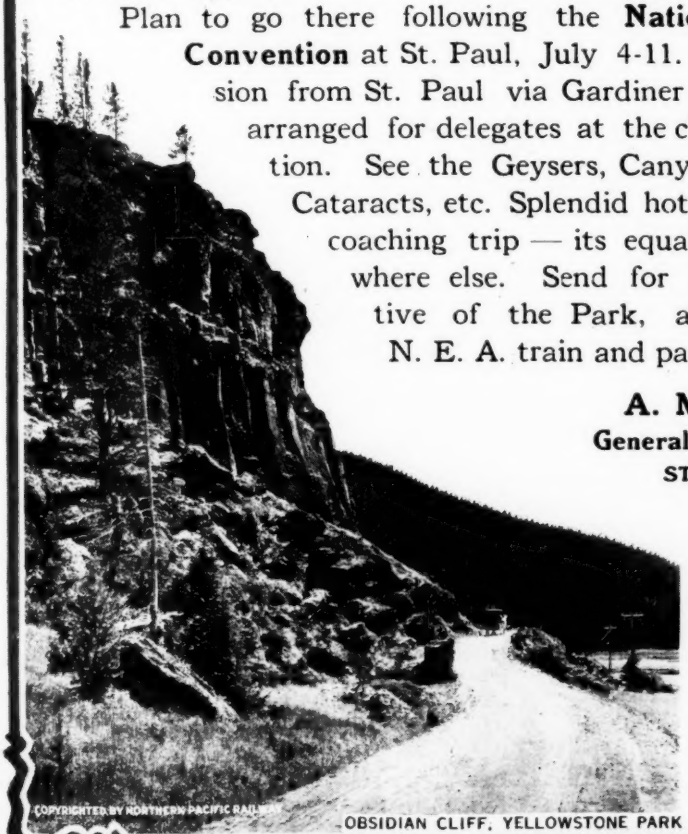


GARDINER GATEWAY

Yellowstone Park

Is **Geographically** and otherwise the most unique and wonderful outing spot on earth. Educationally it is unsurpassed. Plan to go there following the **National Educational Convention** at St. Paul, July 4-11. A special excursion from St. Paul via Gardiner Gateway is being arranged for delegates at the close of the convention. See the Geysers, Canyons, Hot Springs, Cataracts, etc. Splendid hotels and a 143-mile coaching trip — its equal to be found nowhere else. Send for literature descriptive of the Park, also of the special N. E. A. train and party.

A. M. CLELAND
General Passenger Agent
ST. PAUL, MINN.


COPYRIGHTED BY NORTHERN PACIFIC RAILWAY
OBSIDIAN CLIFF, YELLOWSTONE PARK

NORTHERN PACIFIC
YELLOWSTONE PARK LINE

Geographical and Industrial Studies

UNITED STATES..... ....$0.65 **EUROPE $0.80**

By Nellie B. Allen, Head of the Department of Geography, State Normal School, Fitchburg, Mass.

Geography can be made one of the most fascinating of the elementary schoolroom studies, but it has all too often been reckoned by boys and girls one of the "dry" studies, for the textbook has seldom made any appeal to their love of the picturesque.

Miss Allen has taken advantage of this imaginative quality of the child's mind and his interests in "things that happen." By means of photographs and interesting texts she gives the pupils real glimpses of the men who go down into the mines, of the great steamships that carry lumber and fruit and silks, of the vast stretches of wheat fields with their twenty-horse reapers. Every child is eager to make even a short journey, and in Miss Allen's books he is taken on many journeys where he sees and hears what he will never forget.

GINN AND COMPANY

Boston New York Chicago London
Atlanta Dallas Columbus San Francisco

Modern Geography

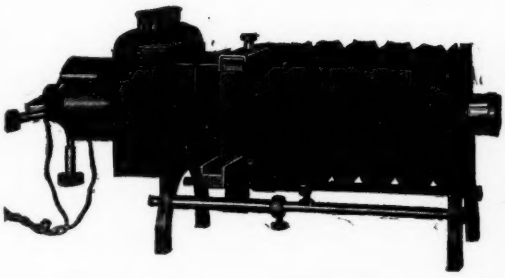
By Rollin D. Salisbury, Harlan H. Barrows, and Walter S. Tower, of the Department of Geography, University of Chicago. 406 pp. 7 colored maps. 12 mo. $1.25.

This book is "physical geography," not incidentally, but fundamentally. That is, it is first of all physiography, pure and simple, at physiography's best—thorogoing and substantial enough to claim a place in the school course in its own right. But the book is something more; its practical or "human" amplifications make it also industrial and commercial geography at their best.

The earth aspect and the man aspect of the subject are not, however, presented separately, and then merely bound together between two covers. On the contrary, physical fact and its human response are directly associated thruout. There is hardly a page which does not suggest the influence of geographic conditions on man's activities. The whole subject is thus organized, in the biological sense, with physiography as its sturdy backbone.

HENRY HOLT & COMPANY

34 West 33rd Street NEW YORK **623 South Wabash Avenue CHICAGO**



Make your geography lessons more vivid and consequently more lasting in result with the aid of a

BAUSCH & LOMB BALOPTICON

Projects brilliant pictures from ordinary lantern slides—scientifically constructed but very simple to operate, requiring only slight attention after starting—supplied for electricity, acetylene or gas.

Model B, illustrated above is unusually compact and inexpensive but gives splendid results in ordinary classrooms, attaching to lamp socket of any regular wiring. **Price, $18.00 and $22.00.**

Model C offers wider possibilities but can also be equipped to connect with ordinary electric circuit. **Price, $25.00 and up.**

Other models for opaque, microscopical and all kinds of projection. Write for catalog.

Bausch & Lomb Optical Co.

NEW YORK WASHINGTON CHICAGO SAN FRANCISCO
LONDON ROCHESTER, N.Y. FRANKFORT

KAGERAH'S

Technological Educational Appliances

For Commercial and Industrial Geography

More than forty boxes of materials, representing all stages in the preparation and manufacture of important commercial products of vegetable, animal and mineral origin. Admirably arranged for schoolroom use. Made and widely used in Germany. Indispensable to the effective teaching of Industrial Geography. Prizes and medals taken at several International Expositions.

For circular of information, address

Karl Kagerah

Agent for all North America,
899 Sixth St., Milwaukee, Wis.

THE WORLD AWAKENING
To a New Development

With Asia, India, and the Philippines in the throes of a new birth, with Panama removing the barriers of the ages, and young America thrilling to her own great prospects and relations, we must bestir ourselves to study the world that presses upon us. Study with maps—maps for the times, reliable maps such as

The Goode Series of School Wall Maps

By Professor J. Paul Goode, of the University of Chicago,

a masterly representation of the continents and the world, presented with a realism, beauty, and accuracy not attained up to this time in school maps. Legibility and simplicity are dominating characteristics.

Issued in Two Series
Physical and Political

Great Feature Classification of Material According to Distance

Physical Maps. Here the lowlands are spread out before us, the rich green suggesting fertile fields and valleys, and the elevations in yellow and brown. Contours and hachuring strengthen the physical picture. Political features—boundaries are in heavy black lines, and cities, capitals and towns are delineated by symbols that make strikingly clear the difference in importance. Drainage is well brought out.

Political Maps. These portray adequate and unexcelled data, entered in perfect relation. Important features have great carrying power, and lesser features, at a short distance, seem to sink into the background. Boundaries are indicated by heavy black lines and ribbons of color, and cities entered in graded type symbols. Chief routes of trade—railway and steamship lines—are shown, also cables.

Maps Completed In Both Series

NORTH AMERICA **EUROPE** **EURASIA**

Be sure to see our great Map Exhibit at St. Paul—N. E. A.

Rand McNally & Company

CHICAGO NEW YORK

CORNELL UNIVERSITY---SUMMER SESSION

July 6 — August 14

This year ten courses of instruction and twelve excursions and field trips are offered in the Department of Geography and Geology. A special illustrated pamphlet describing them, and the general announcement, covering 250 other courses in Education, Language and Literature, Music, Mathematics, Science, Agriculture, and Home Economics, will be sent on application to the Secretary of the University, Ithaca, N. Y.

University of Wisconsin---Summer Session, 1914

JUNE 22 TO JULY 31

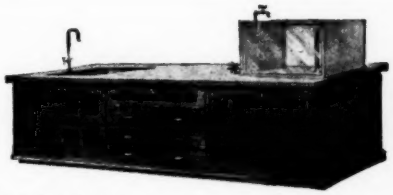
320 COURSES. 175 INSTRUCTORS. Graduate and undergraduate work in all departments leading to all academic degrees. Letters and Science (including Medicine), Engineering, Law, and Agriculture (including Home Economics). TEACHERS' COURSES in high-school subjects. Exceptional research facilities. NEWER FEATURES: Agricultural Economics, Business Administration, Community Music, Eugenics, Festivals, Journalism, Manual Arts, Moral Education, Physical Education and Play.

FAVORABLE CLIMATE. LAKESIDE ADVANTAGES.

One fee for all courses, $15; except Law (10 weeks), $25; and Field Course at Devil's Lake. For illustrated bulletin, address

REGISTRAR, UNIVERSITY, MADISON, WISCONSIN

Biological Instructor's Desk No. 8316



Designing your laboratory furniture according to what you **think** you need, frequently makes the equipment cost exorbi ant. The logical solution of the problem is to buy standardized furniture. Write for Physiography Furniture Catalog J-6.

Kewaunee Mfg. Co.

LABORATORY FURNITURE EXPERTS

KEWAUNEE, WIS.

ATTINGER FRERES, EDITORS, 2, RUE ANTOINE DUBOIS, PARIS

Onesime RECLUS

ATLAS

DE LA

PLUS GRANDE FRANCE

(ATLAS OF GREATER FRANCE)

Geographical - Economic - Political - Departmental
Colonial

160 quarto plates
in colors

160 pages of text
in 20 parts

PRICES FOR ADVANCE ORDERS
70 francs per copy,
in paper
76 francs per copy,
bound

This atlas is to be issued in a few weeks. Following publication the prices will be advanced to 80 francs per copy, in paper, and 86 francs per copy, bound.

Specimen pages sent free post paid upon request addressed to the editors:

ATTINGER FRERES, 2, RUE ANTOINE DUBOIS
PARIS, FRANCE

Lantern Slides

—of—

YELLOWSTONE NATIONAL PARK

AMERICAN INDIANS

ALASKA SCENES

NORTHWEST STATES

For Excellent Slides Reasonably Priced

ADDRESS

Haynes Photo Studios

F. J. HAYNES
OFFICIAL PHOTOGRAPHER
YELLOWSTONE PARK

ST. PAUL,
MINN., U. S. A.

Why the Indian is Impressed With Civilization

One might tell the Indian of the wonders of Manhattan Island but the story would not impress him so deeply as his actually seeing what has taken place here. So with teaching the child. Let him see in picture form the essentials of any subject, Geography, History, Literature, Geology, etc., and those essentials will impress themselves indelibly upon his memory.

The U & U Stereopticon Lantern View Method of Instruction places the important facts of the different school courses before the child in the strongest psychological manner, bringing into activity the constructive imagination of the pupil, stimulating original thought and expression through the skillful use of pictures.

The System Includes

The U & U Stereopticon Method of Visual Instruction is presented through 1,000 educational lantern slides arranged according to a cross-indexed plan. The full teaching capacity is equal to 10,000 slides selected on the usual expensive and cumbersome method, because each scene may be used to illustrate from two to six, in some cases ten or more, of the different study topics taught in the regular school courses.

The Authority

Each of the 1,000 lantern slides used in teaching the different subjects represented in the system is completely and technically described by the highest educational authority in the country, and the work accomplished covers the entire visualistic requirements of the Graded and High Schools.

How Supplie

The 1,000 slides are supplied in cabinet form, cross-indexed and so classified as to render the full teaching value of the entire collection instantly available.

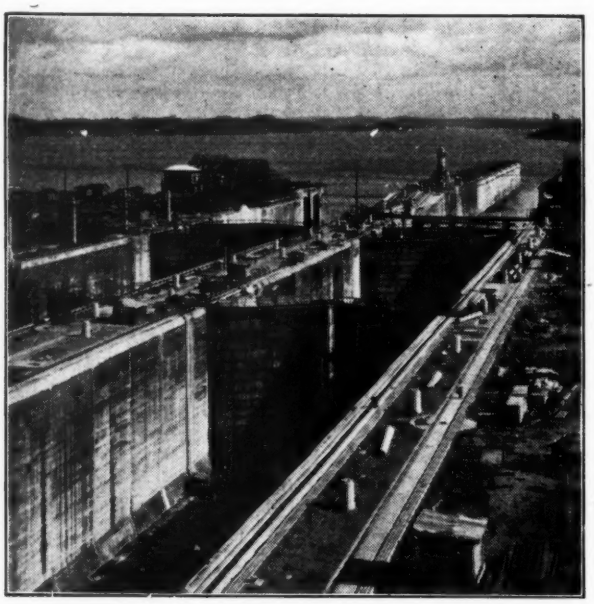
This is only a part—permit us to send you a full description of the system with catalogs of lanterns, etc., etc.

UNDERWOOD & UNDERWOOD

12-14 West 39th St.

No. O New York

LANTERN SLIDES AND STEREOGRAPHS



"21720 Gatun Lake and South End of Gatun Locks, Panama Canal. Copyright."

Once upon a time, so the story goes, a boy watching the cows high up on a mountain side in Austria, saw a wonderful blue flower growing in the grass. As he picked it a great door in the mountain side opened revealing a cavern filled with chests of gold, silver, and jewels. You may believe the boy filled his pockets, but all the time a voice kept saying—"Don't forget the best." Finally he could carry no more. As he came out the door closed tight. Too late he remembered that he had left the key-flower inside. Without this key the door was forever closed. Since that day no one has ever been so lucky as to find another **"Key-Flower"** until now, after many hundred years, a universal key is discovered, which daily unlocks the treasure doors of his own and foreign lands to every child. It is the **Flower** of all **Picture Material,** the **"KEYSTONE '600 SET" "**

Under the magic wand of the "Teachers' Guide," the 600 subjects of the set expand into 6000. Every teacher may learn the secret by writing to the Discoverers, the **KEYSTONE VIEW COMPANY** (Incorporated) **MEADVILLE, PENNSYLVANIA.**

Do you wish the free use of our colored lantern slide sets? Write for Advice.

SCHOOL SCIENCE AND MATHEMATICS

The Journal for all Progressive Science and Mathematics Teachers.

Its subscription list contains names of teachers in all countries of the globe. It is the Official Organ of many Associations of Science and Mathematics Teachers. It gives new ideas and methods of scientific and mathematical instruction —practical articles on the teaching of science and mathematics. Suggestive, illustrated descriptions of apparatus, experiments, laboratory equipment and plans. Short, newsy, helpful notes on the progress in science and mathematics. Yearly subscription, $2.00.

A trial subscription of six months for one dollar to any one mentioning the JOURNAL OF GEOGRAPHY.

SCHOOL SCIENCE AND MATHEMATICS

2059 East Seventy-second Place - - Chicago, Illinois

AN ENCYCLOPEDIA OF THINGS GEOGRAPHICAL

Would give the name

"W. & A. K. Johnston"

as a synonym for Art, Accuracy,

Color Permanency, and Up-to-Dateness, when referring to Maps, Globes or Charts.

A. J. NYSTROM & CO., Chicago

SOLE UNITED STATES AGENTS

Write for Complete Catalogue of Geographical Equipment.

GOOD BOOKS
FOR THE TEACHING OF
GEOGRAPHY

NATURAL INTRODUCTORY GEOGRAPHY	$0.60
THE SAME, PART I	.40
THE SAME PART II	.40
NATURAL SCHOOL GEOGRAPHPY	1.25
THE SAME, PART I	.75
THE SAME, PART II	.75
ATLAS AND REFERENCE MAPS FROM SCHOOL GEOGRAPHY	.35
RABENORT'S GEOGRAPHY:	
NORTH AND SOUTH AMERICA	.50
NORTH AMERICA—UNITED STATES	.50
EUROPE	.50
CARPENTER'S GEOGRAPHICAL READERS:	
NORTH AMERICA	.60
SOUTH AMERICA	.60
EUROPE	.70
ASIA	.60
AFRICA	.60
AUSTRIA, OUR COLONIES, AND OTHER ISLANDS OF THE SEA	.60
CARPENTER'S READERS ON COMMERCE AND INDUSTRY:	
HOW THE WORLD IS FED	.60
HOW THE WORLD IS CLOTHED	.60
HOW THE WORLD IS HOUSED	.60

New York
Cincinnati
Chicago

AMERICAN BOOK COMPANY
330 East 22d Street
CHICAGO

Books for Teachers and Students of Education.

For Teachers Reading Circles, Training Schools, Normal Schools, and College Classes in Pedagogy

School Hygiene

By Fletcher B. Dresslar, Ph. D., Specialist in School Hygiene and School Sanitation, U. S. Bureau of Education.

Cloth. 12mo. Ill. xviii+409 pages. $1.25.

A brief course containing definite authoritative information on school hygiene and sanitation. A thorough treatment in brief, convenient form from the hygienic standpoint of every feature of the school system. The information needed by teachers, supervisors and school administrators on school hygiene and sanitation.

Intensive Studies in American Literature

By Alma Blount, Ph. D., Assistant Professor of English in the Michigan State Normal College.

Cloth. 12mo. Ill. xxi+331 pages. $1.10.

A textbook of English for students of literature. A scholarly treatment containing Suggestions to Teachers and students of the most representative features of American literature. This book is modern in method and content. It is an effort to teach literature through a direct appreciation of literary masterpieces.

Principles and Methods of the Teaching of Geography

By Frederick L. Holtz, A. M., Head of Model School, Brooklyn Training School for Teachers.

Cloth. 12mo. xii+359 pages. $1.10.

This practical book presents in a clear and simple manner the salient features of modern methods of geography teaching. While it concerns the ideals of the expert in the teachring of geography, nevertheless, it contains all the practical lessons necessary to the accomplishment of these ideals.

Educational Resources of Village and Rural Communities

Edited by Joseph K. Hart, Assistant Professor of Education, University of Washington.

Cloth. 12mo. x+277 pages. $1.00.

In this book are set forth the great lines of community interest, activity and resource. It is a constructive treatment of all these important topics, presenting definitely the facts that should be considered in the making of a community survey.

The Montessori Method and the American School

By Florence Elizabeth Ward, Professor of Kindergarden Education, Iowa State Teachers College.

Cloth. 12mo. Ill. xvi+243 pages. $1.25.

The work of the trained observer in teaching, the expert investigator in the kindergarten, in the elementary school field and a recognized authority in the training of elementary school teachers for the American schools.

The Macmillan Company

NEW YORK BOSTON ATLANTA
CHICAGO SAN FRANCISCO DALLAS